

EV-S9000E AE/B/NP/UB/VC

RMT-138B

SERVICE MANUAL

UK(UB) Model
German(VC) Model
Italian(AE) Model
North European(NP) Model
French(B) Model

Remote commander
is available as a
unit. See page 5-1
for repair parts.



video Hi8
F MECHANISM

For MECHANICAL ADJUSTMENT, refer to the "8mm
Video MECHANICAL ADJUSTMENT MANUAL V
(F MECHANISM)" (9-973-445-11).

System

Video recording system

Rotary two-head helical scanning FM
system

Audio recording system

Standard: Rotary head FM system (2
channels)
PCM: PCM system (2 channels)

Video signal

EV-S9000E AE/NP/VC:
CCIR standard, PAL colour
System B/G
EV-S9000E B:
CCIR standard, PAL/SECAM colour
System L and B/G
EV-S9000E UB:
CCIR standard, PAL colour
System I

Usable cassettes

8 mm video format cassettes

Tape speed

SP: 20.051 mm/sec.
LP: 10.058 mm/sec.

SPECIFICATIONS

Recording/playback time

SP: 2 hrs., LP: 4 hrs. (using a Sony E5-
120 cassette)
SP: 1.5 hrs., LP: 3 hrs. (using a Sony
E5/P5-90 cassette)

Fast-forward/rewind time

2 min. 15 sec.
1 min. (high-speed rewind)
(using a Sony E5/P5-90 cassette)

Channel coverage

EV-S9000E AE/NP/VC and B (system
B/G):
VHF E2 - E12 (A - H Italian model
only)
CATV S01 - S03, S1 - S20
HYPER S21 - S41
UHF E21 - E69
EV-S9000E B (system L):
UHF F2 - F10
CATV B - Q
HYPER S21 - S41
UHF F21 - F69
EV-S9000E UB:
UHF B21 - B61

RF output signal

EV-S9000E AE/NP/VC/B:
UHF channels E30 - E39 (variable)
EV-S9000E UB:
UHF channels B30 - B39 (variable)

Stereo/bilingual system

EV-S9000E AE/NP/VC:
German two carrier system
EV-S9000E NP:
B/G NICAM
EV-S9000E UB:
I NICAM

—continued on next page—



Hi8 VIDEO CASSETTE RECORDER
SONY

Inputs and outputs

Antenna

75-ohm asymmetrical aerial socket

EURO-AV: LINE 1

21-pin
Video input: pin 20
Audio input: pins 2 and 6
Video/luminance output: pin 19
Chrominance output: pin 15
Audio output: pins 1 and 3

CANAL PLUS (EV-S9000E B/N/P)

21-pin

PAY-TV (EV-S9000E VC)

Video input: pin 20
Audio input: pins 2 and 6
Video output: pin 19
Audio output: pins 1 and 3

LINE IN 2 and 3

S VIDEO IN (4-pin mini DIN) 1 each
Y: 1 Vp-p 75 ohms (unbalanced), sync negative
C: 0.3 Vp-p (colour burst) 75 ohms (unbalanced)
VIDEO IN (phono jack) 1 each
Input signal: 1 Vp-p, 75 ohms (unbalanced), sync negative
AUDIO IN (phono jack) 2 each
Input level: -7.5 dBs (0 dBs = 0.775 Vrms)
Input impedance: more than 47 kilohms

LINE OUT

S VIDEO OUT (4-pin mini DIN)
Y: 1 Vp-p 75 ohms (unbalanced), sync negative
C: 0.3 Vp-p (colour burst) 75 ohms (unbalanced)
VIDEO OUT (phono jack)
Output signal: 1 Vp-p, 75 ohms, (unbalanced), sync negative
AUDIO OUT (phono jack)
Standard output: -7.5 dBs at load impedance 47 kilohms
Output impedance: less than 10 kilohms

Microphone input

Minijack -60 dBs, for low impedance microphone

Headphone jack

Stereo minijack -26 dBs, 8 ohms

CONTROL S IN

Minijack

LANC

Stereo mini-minijack

General

Power requirements

220 - 240 V AC, 50 Hz

Power consumption

38 W

Operating temperature

5°C to 40°C

Storage temperature

-20°C to 60°C

Dimensions

Approx. 466 x 119 x 366 mm (w/h/d) including projecting parts and controls

Weight

Approx. 8.5 kg

Supplied accessories

Remote commander (1)
R6 (size AA) batteries (2)
Aerial cable (1)
Audio cable (1)
Mains lead (1)
RF screwdriver (1)
S-video cable (1)
LANC cable (1)



Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
6. Flexible Circuit Board Repairing
 - Keep the temperature of the soldering iron around 270°C during repairing.
 - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
 - Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ


LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHEMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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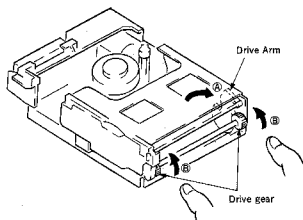
1. DESTINATION DIFFERENCE SCHEMATIC COMPONENT TABLE LIST

This manual are for the EV-S9000E AE, EV-S9000E B, EV-9000E NP, EV-S9000E UB, and EV-S9000E VC. Check model number by looking at the rear panel of VCR.

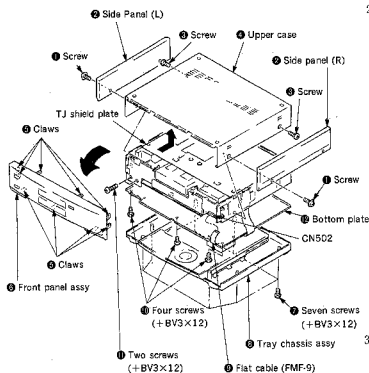
MODEL FEATURE	AE (Italian)	B (French)	NP (North European)	VC (German)	UB (UK)
CS-45 BOARD (Recording/Playing NICAM broadcasts)	—	—	B/G NICAM	—	I NICAM
CS-45 BOARD Recording Canal+/PAY-TV programmes	—	○	○	○	—
TC-30 BOARD (SECAM → PAL TRANCECODER)	—	○	—	—	—
VP-38 BOARD (Recording with VPS signals)	—	—	—	○	—

2. REMOVAL OF CASSETTE AT FAILURE WITH CASSETTE INSERTED

- ④ If tape is wound on the drum and it cannot be removed:
Rotate the capstan motor wheel in either direction and rotate the S or R reel to house the tape. Then, perform Procedure ⑥.
- ⑥ If tape is housed in the cassette half and cannot be removed:
 - ① Remove the MD block. (For removal, refer to Section 3-3.)
 - ② Rotate the drive arms at both sides of L frame and cassette compartment in the arrow direction ④.
 - ③ Rotate the connecting gear in the arrow direction ⑤ with both the thumbs.

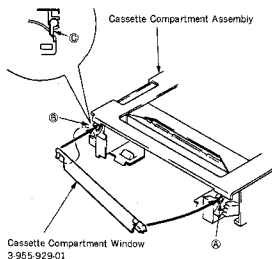


3. REPLACEMENT OF EXTERNAL PARTS



4. REPLACEMENT OF CASSETTE DOOR ASSEMBLY

- 1) Remove the front panel.
- 2) First undo ④ portion toward you and then undo ③.



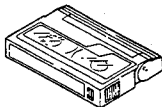
- 3) When installing, as shown above, first put in ⑤ portion by setting the claw ③. Then, put in ④ portion and install so that the door hangs almost vertically.

5. CLEANING OF VIDEO HEAD AND RUN SYSTEM

Method 1

(Cleaning Method with Cleaning Tape)

- A cleaning cassette should be used. (When using, the attached manual for the cleaning cassette should be thoroughly read.)

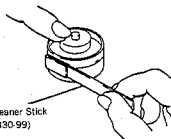


Method 2

(Cleaning Method with Cleaning Liquid)

- ① Remove the upper case of the video deck.
- ② Apply cleaning liquid to a head cleaner stick.
- ③ As shown in the right figure, press the head cleaner stick lightly. Turn the rubber of the rotary upper drum gradually and clean the video deck.

Head Cleaner Stick
(3-601-330-99)



(Cleaning Method for Run System)

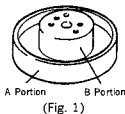
- ① Apply cleaning liquid to a head cleaner stick.
- ② Clean the guides which tape touches directly and the pinch roller with the head cleaner.

6. REPLACEMENT OF UPPER ROTARY DRUM

Method 3

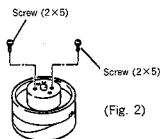
Caution

- Particular care must be taken when handling the video head and the terminals
- When handling the rotary upper drum, do not touch the side (A portion) and hold the top (B portion) (See Fig. 1)

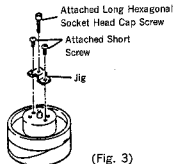


Removal of Rotary Upper Drum

- ① Remove two screws (2×5) (See Fig. 2).

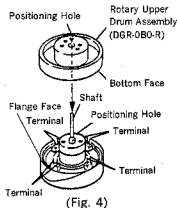


- ② Fix the jig (supplied with the spare rotary upper drum) with the two attached short screws. Then, put the attached long screw into the jig until the rotary upper drum may be removed (See Fig. 3).

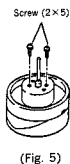


Installation of New Rotary Upper drum

- ① Clean the flange face and the bottom face of the new rotary upper drum (See Fig. 4).
- ② Insert the shaft attached to the jig into the positioning hole in the lower drum. Then, put the shaft through the positioning hole in the new rotary upper drum and set the drum lightly.



- ③ With the shaft inserted into the positioning hole, push into the upper drum lightly with a hand. If the drum is not allowed to be bottomed, alternately tighten two screws (2×5) gradually and install the drum (See Fig. 5).
- ④ Pull out the shaft inserted. If the shaft is not allowed to be withdrawn smoothly, go back to Step ② and redo the procedure.

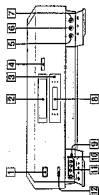


- ⑤ Once the drum has been replaced, clean the video head and the run system with a head cleaner stick (See "Cleaning Method 2 for Video Head and Run System").

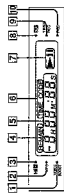
Refer to the pages indicated in () for details.

Index to parts and controls

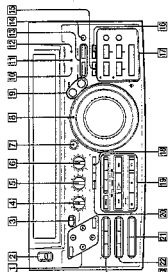
Front panel



Front panel display window



Operation panel



- 1 ON/STANDBY switch/indicator (11)
- 2 Tape compartment (23)
- 3 Remote sensor (7)
- 4 EJECT button (23)
- 5 Microphone jack (63)
- 6 Headphone jack
- 7 MIN/MAX (headphone volume) control
- 8 Display window
- 9 LANC jack (54)
- 10 CL button
- 11 LINE IN 2 AUDIO/VIDEO/PS jacks (63)
- 12 OPERATION PANEL OPEN/CLOSE switch (8)

- 1 VOICE BOOST indicator (39)
- 2 VPS indicator (EV-S900AE V.C only) (35)
- 3 HIR indicator (5)
- 4 REMAIN indicator (24)
- 5 Linear time counter/Clock
- 6 TIME CODE indicator (58)
- 7 Tape operation indicator
- 8 Tape indicator
- 9 TIMER REC indicator
- 10 REC (recording) indicator (27)

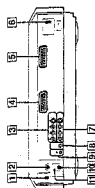
- 1 MENU CURSOR \blacktriangle / \blacktriangleright / \blacktriangleleft / \blacktriangleleft and EXECUTE buttons (10)
- 2 COMMAND MODE VTR OFF / 1/2/3 switch (8)
- 3 AUDIO MONITOR PCM/MIX/STD (HI-FI) switch (23)
- 4 STD AUDIO LEVEL control (64)
- 5 PCM REC BALANCE control (27)
- 6 PCM REC LEVEL control (27)
- 7 JOG dial/SHUTTLE ring (23)
- 8 INDEX SEARCH buttons (45)
- 9 TBC indicator (43)
- 10 HI-FI STEREO indicator (25)
- 11 PCM indicator (25)

- 13 INDEX MARK/ERASE buttons (67)
- 14 TAPE SPEED (S/LP) button (27)
- 15 COUNTER RESET button (24)
- 16 COUNTER SELECT button (24)
- 17 Tape editing buttons
- 18 TIME CODE WRITE button (58)
- 19 Tape operation buttons
- 20 AUDIO DUB button (63)
- 21 PROGRAM buttons (11)
- 22 EXT button (50)
- 23 VPS button (EV-S900AE V.C only) (35)
- 24 INPUT SELECT button (11)
- 25 NR button (43)
- 26 TV/VTR button (11)
- 27 TIMER CHECK button (24)

SECTION 1 GENERAL

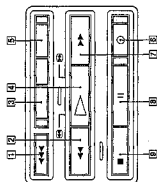
This section is extracted from instruction manual.

Rear panel



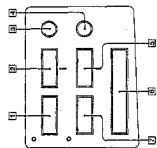
- 1 RF CHANNEL screw (11)
- 2 AERIAL OUT connector (9)
- 3 LINE IN 3 AUDIO/VIDEO/S VIDEO jacks (10)
- 4 EURO-AV (LINE 1) connector (10)
- 5 CANAL+ connector (EV-59009E NP/B only) /
PAY-TV DECODER connector (EV-59009E VC only) (20)
- 6 AC IN connector (9)
- 7 LINE OUT AUDIO/VIDEO/S VIDEO jacks (10)
- 8 CONTROL S IN jack (54)
- 9 LANC connector (54)
- 10 AERIAL IN connector (9)
- 11 LOCAL/DX switch (22)

Tape operation buttons



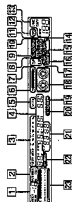
- 1 HI-SPEED REW button (23)
- 2 REW button (23)
- 3 TIMER REC ON/OFF button (28)
- 4 PLAY button (23)
- 5 QUICK TIMER button (28)
- 6 REC button (27)
- 7 FF button (23)
- 8 PAUSE button (23)
- 9 STOP button (23)

Tape editing buttons



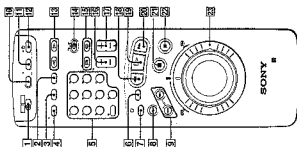
- 1 LANC REMOTE button (57)
- 2 ASSEMBLE button (59)
- 3 EDIT MONITOR ON/OFF button (62)
- 4 BACK button (61)
- 5 MARK button (59)
- 6 SYNC/PRO EDIT/START button (57)
- 7 EDIT STANDBY button (57)

Operation panel display window



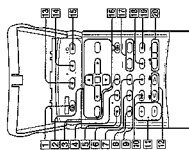
- 1 INDEX SCAN and index number indicator (45)
- 2 ASSEMBLE IN/OUT indicator (59/60)
- 3 EVERY WEEK and weekday indicators (23)
- 4 Linear time counter/recording start time indicator (22)
- 5 VTR indicator (11)
- 6 Remaining tape length indicator
- 7 SP/LP (tape speed) indicators (28)
- 8 EDIT indicator (50)
- 9 SYNCHRO EDIT indicator (54)
- 10 NCAM indicator (30)
- 11 AUDIO DUB indicator (63)
- 12 VTS indicator (EX-S9000E VC only) (35)
- 13 Channel number/input mode indicator (11)
- 14 MAIN/SUB indicators (25)
- 15 L/R indicators (28)
- 16 STEREO indicator (25)
- 17 AUTO indicator
- 18 Cassette indicator
- 19 REC indicator (27)
- 20 TIMER indicator (26)
- 21 Quick linear according time/current time/recording stop time (19)
- 22 TIME CODE indicator (56)
- 23 Peak level meter

Remote commander (front,
with cover closed)



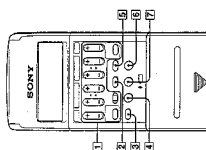
- 1 TV/VTR remote control switch (7)
- 2 EDIT MONITOR button (62)
- 3 AUDIO MONITOR button (25)
- 4 DISPLAY button (24)
- 5 Programme number buttons and +/- button (13)
- 6 DIGITAL SCAN button (38)
- 7 JOC/SHUTTLE button (38)
- 8 <<<< HI-SPEED REW button (23)
- 9 <<< / >>> INDEX SEARCH buttons (45)
- 10 TIMER REC ON/OFF button (26)
- 11 TV/VTR button (11)
- 12 < (on/standby) button (11)
- 13 << / >> SHUTTLE EDIT button (50)
- 14 COMMAND MODE VTR 1/2/3 switch (8)
- 15 < / > SEARCH buttons (23)
- 16 VOL (volume) +/- button
- 17 PROG (programme) +/- button (11)
- 18 << REW button (23)
- 19 >> PLAY button (23)
- 20 >>> FF button (23)
- 21 >>> STOP button (23)
- 22 >>> PAUSE button (23)
- 23 JOC dial/SHUTTLE ring (23)

Remote commander (front,
with cover opened)



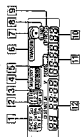
- 1 13/14 VTR remote control switch (7)
- 2 Menu buttons (10)
MENU (11) /> buttons (38)
EXECUTE button
- 3 VOICE BOOST button (39)
- 4 DISPLAY button (24)
- 5 VISUAL SCAN button (46)
- 6 COUNTER SELECT button (24)
- 7 TAPE RETURN button (38)
- 8 COUNTER RESET button (24)
- 9 X2 (two-times speed) button (38)
- 10 SLOW button (38)
- 11 13/14 VTR remote control switch (7)
- 12 MENU buttons (10)
MENU (11) /> buttons (38)
EXECUTE button
- 13 VOICE BOOST button (39)
- 14 DISPLAY button (24)
- 15 VISUAL SCAN button (46)
- 16 COUNTER SELECT button (24)
- 17 TAPE RETURN button (38)
- 18 COUNTER RESET button (24)
- 19 X2 (two-times speed) button (38)
- 20 SLOW button (38)

Remote commander (rear,
with cover opened)



- 1 Timer recording/clock buttons (19, 32)
- 2 DAY button
- 3 STOP button
- 4 STOP button
- 5 PROG +/- button
- 6 TRANSMIT button
- 7 CLOCK SET button
- 8 TAPE SPEED button (32)
- 9 MEMORY button (34)
- 10 TIMER ON SCREEN button (32)
- 11 INPUT SELECT button (32)
- 12 TIMER CLEAR button (36)
- 13 TIMER CHECK button (36)

Remote commander display window



- 1 EVERY and weekday indicators (35)
- 2 VTR 1/2/3 (command mode) indicator (8)
- 3 SP/LP (tape speed) indicator (28)
- 4 MEMORY A B C D indicator (34)
- 5 Battery status indicator (7)
- 6 TRANSMIT indicator (19)
- 7 Execution signal indicator (33)
- 8 LINE indicator
- 9 PROG indicator
- 10 Programme channel/line input indicator
- 11 Timer preset end time indicator (32)
- 12 Timer preset date and start time indicator (32)

Welcome!

Thank you for purchasing the Sony Video Cassette Recorder **Hi8** (VCR). Here are some of the features you'll enjoy with your VCR:

- PCM audio recording system feature that allows you to take advantage of the latest technology in high-grade audio systems
- POC and SHUTTLE ring for easy search operations
- Hi-Fi playback system for excellent reproduction of music
- LANC \square jack to connect peripheral equipment such as another VCR which can then be controlled by this VCR.

Compatible colour systems

This VCR is designed to record and play back using the PAL colour system. Recording of video sources based on other colour systems cannot be guaranteed. The EV-5900E B can receive PAL colour signals and SECAM signals which are converted to PAL colour signals. Recording and playback are based on the PAL colour system.

The instructions in this manual are for the EV-5900E AE, EV-5900E B, EV-5900E NF, EV-5900E UN, and EV-5900E VC. The EV-5900E NF is the model used for illustration purposes. Any difference in operation is clearly indicated in the text, for example, "EV-5900E VC only."

Types of differences

Feature	Model	AE	B	NF	VC	UN
Recording/playback NICAM broadcast		-	-	○	○	○
Recording/playback ZWEITON (German stereo broadcasts)		•	-	•	•	-
Recording with VPS signals		-	-	-	-	-
Recording Canal-/PAY-TV programmes		-	•	•	•	-

Hi8 (high eight) video system

Both **Hi8** and standard **8** cassette tapes can be used with this VCR. Refer to the charts below for the compatibility between the **Hi8** video system and the standard **8** system.

When playing a tape

This VCR automatically detects the type of tape being played, either **Hi8** or standard **8**. This VCR also automatically detects the tape speed (either SP or LP) the tape was recorded in.

Tape type	Recording format	Playback mode
Hi8 tape	Hi8 (high eight)	Hi8 (high eight)
Standard 8 tape	8 (standard item)	8 (standard item)
Standard 8 tape	8 (standard item)	8 (standard item)

When recording on a tape

You can set this VCR to record in either **Hi8** or standard **8** format. See "Loading a new operator" on page 46.

Tape type	Recording format	SET UP MENU setting
Hi8 tape	Hi8 (high eight)	AUTO
Standard 8 tape	8 (standard item)	OFF
Standard 8 tape	8 (standard item)	AUTO or OFF

Saving a recording

Slide out the tab on the cassette so that the red colour appears. To re-record on the cassette, slide the tab back.

- Notes
- **Hi8** recording or playback can only be done using a **Hi8** tape.
 - You cannot make **Hi8** format recordings on standard **8** tapes.

Checking your model name

Step 1

Unpacking

Check that you have the following items:

- Remote commander



- 16 (five AA) batteries



- Aerial cable



- S video cable



- Audio cable



- Mains lead



- Mains lead (EV-30000E US only)



- RF screwdriver



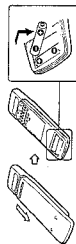
- LANC cable



Step 2

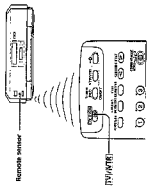
Setting up the remote commander

Insert two 16 (five AA) batteries by matching the + and - on the batteries to the diagram inside the battery compartment.



Using the remote commander

Your remote commander is operated this VCR and a Sony TV. Buttons on the remote commander marked with a dot (•) can be used to operate your TV.



To operate	See (TV/ATR)
the VCR	VCR and point at the remote sensor on the VCR
a Sony TV	TV and point at the remote sensor on the TV

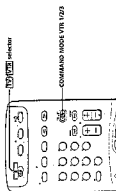
Notes

- Do not use the batteries should last for approximately three to six months. When battery power gets low, the CR indicator on the remote commander will blink.
- If you do not use the remote commander for an extended period of time, remove the batteries to avoid possible damage from battery leakage.
- Do not use the remote commander with other Sony or non-Sony remote controls.
- Do not use different types of batteries.

Step 2 Setting up the remote commander (continued)

Setting the command mode

You can select three different positions for the command mode setting.



- 1 Turn on the VCR, then press **OPERATION PANEL OPEN/CLOSE** to open the operation panel.
Set the **COMMAND MODE VTR OFF/1/2/3** selector on the VCR to "VTR 2."
- 2 Set the **COMMAND MODE VTR 1/2/3** selector on the remote commander to "VTR 2."
- 3 Set the **[TV/VCR]** remote control selector on the remote commander to "[VTR]."

Note

If you set the **COMMAND MODE VTR OFF/1/2/3** selector on the VCR to "OFF", you can no longer control this VCR from any other Sony remote commander.

Controlling other Sony video equipment if other Sony video

equipment has a **COMMAND MODE** selector

1 Set the **COMMAND MODE 1/2/3** selector on the remote commander

to the same position as the position you set for the VCR.

2 Set the **COMMAND MODE** selector of any other video equipment to

the same position you selected in step 1.

If other Sony video equipment does not have a **COMMAND MODE**

selector

You can control other Sony video equipment using the following

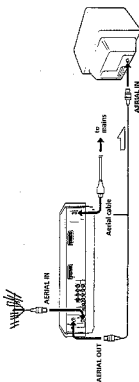
1) Infrared remote controlled Sony Betacam VCRs: position 1 (Some

units may not be controlled in this mode.)

2) Sony 8 mm format VCRs: position 2

3) Sony VHS format VCRs: position 3

Step 3 Connecting the VCR



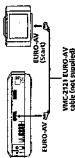
- 1 Disconnect the aerial input cable from your TV and connect it to **AERIAL IN** of the VCR.
- 2 Connect **AERIAL OUT** of the VCR and the aerial input of your TV using the supplied aerial cable.
- 3 Connect **AC IN** of the VCR and the mains supply using the mains lead.
After completing the basic hookup to switch and record TV programmes.

Step 3 Connecting the VCR (continued)

Additional connections

To a TV that has a EURO-AV (S-Card) connector

This additional connection can improve picture and sound quality.



When you play a tape, the picture appears on the screen automatically. (See page 23.)

To a TV that has an S-EURO-AV (S-Card) connector

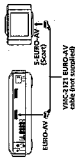
This additional connection can improve picture and sound quality.

Connect your VCR to the TV as shown above, and set EURO AV OUT in the SET UP MENU to S.

- 1) Press MENU.
- 2) Press CURSOR $\blacktriangle/\blacktriangledown$ to select SET UP MENU, then press EXECUTE.
- 3) Press CURSOR $\blacktriangle/\blacktriangledown$ to select EURO AV OUT and set to S.

To a TV that has an S-VIDEO connector

This additional connection can improve picture and sound quality.

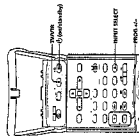


Notes

- If you use the EURO-AV hookup and want to use S-VIDEO input, the playback picture on the TV will be in black and white. In this case, set the TV to S-VIDEO input, or set the EURO AV OUT to NORM in the SET UP MENU.
- If your TV has an S-VIDEO/VIDEO selector switch, set this to the S-VIDEO position to view the picture from the S-VIDEO connector.

Step 4 Tuning the TV to your VCR

If you have connected the VCR to your TV using the EURO-AV, S, or AV cable, skip this step.



1 Press \odot (standby) to turn on the VCR.

2 Press TV/VIDEO to light "VCR" in the operation panel display window.

3 Press INPUT SELECT until "12" appears in the display window.

4 Turn on your TV and select a programme position for video playback.
For the EX-59000E only, make sure that the B/G settings match those on the TV, or no picture appears.

5 Tune the TV between UHF channels 30 and 39 so that a blue screen appears on the TV screen.
Refer to your TV manual for tuning instructions.

6 Press INPUT SELECT until a programme number lights instead.

7 Press PROG \pm to check to see if the TV screen changes to a different programme.
You have now tuned your TV to the VCR. Whenever you play a tape, set the TV to the programme position selected in step 4 above.

To obtain a clear blue screen

The blue screen may not appear clearly in step 5 above. In this case, turn the SCART screw at the rear of the VCR with the supplied RF screwdriver, to a position where the TV clearly displays a blue screen.

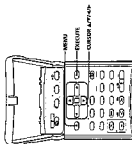
RF CHANNEL VIEW



Step 5

Tuning the VCR to TV channels (EV-S9000E NP/VC only)

Now you can set your VCR to receive broadcast channels using the on-screen display. Tune-in channels for the EV-S9000E NP/VC and the EV-S9000E B are on pages 12 and 16, respectively.



1

Lift the cover of the remote commander and press MENU.
The following menu appears on the TV screen.



2

Press **CURSOR** **▲** to move the cursor (**P**) to **TUNER PRESET**, then press **EXECUTE**.



3

Press **CURSOR** **▲** to move the cursor (**P**) to **NORMAL/CATV**, then press **EXECUTE**.
To presetable TV channels, select CATV.



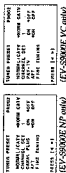
4

Press **CURSOR** **▲** to move the cursor (**P**) to **CHANNEL SET**.



5

Press **PROG** **4** to select the programme position.



6

Press **CURSOR** **▶** to start tuning. The VCR starts searching for a channel and displays the first one it finds on the TV screen. Press **CURSOR** **◀/▶** repeatedly until the channel you want is displayed. The channels are scanned in the following order:

- VHF B2 - E12
- A - H (hidden mode only)
- UHF B21 - E69
- CATV 51 - 503
- HYPER 521 - 541
- CATV 501 - 503

If you know the number of the channel you want, press the number buttons. For example, for channel 5, first press "V" and then press "5."

For PAY-TV/Canal Plus channel settings, see page 26 for details.

7

To allocate another channel to another programme position, repeat steps 5 and 6.

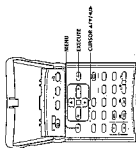
8

Press **EXECUTE** to store all the allocated channels.



Step 5 Tuning the VCR to TV channels (EV-S9000E B only)

Now you can set your VCR to receive broadcast channels using the on-screen display. Tuning instructions for the EV-S9000E AEU/B and the EV-S8000E NPVC are on pages 12 and 14, respectively.



- 1 Lift the cover of the remote commander and press MENU.
The following menu appears on the TV screen.



- 2 Press CURSOR Δ/∇ to move the cursor (\triangleright) to TUNER PRESET, then press EXECUTE.



- 3 Press CURSOR Δ/∇ to move the cursor (\triangleright) to SYSTEM, then press CURSOR \leftarrow/\rightarrow to select either L or BIG.
 - To tune in French broadcasts, set to L.
 - To tune in the PAL system broadcasts (for example, German or Swiss broadcasts), set to B/C.



- 4 Press CURSOR Δ/∇ to move the cursor (\triangleright) to NORMAL/CATV, then press CURSOR \leftarrow/\rightarrow to select either NORM or CATV.
 - To tune in VHF or UHF channels, set to NORMAL.
 - To tune in CATV or HYPER channels, set to CATV.



5

Press CURSOR Δ/∇ to move the cursor (\triangleright) to CHANNEL SET.



6

Press PROG \pm to select the programme position.

You know the number of the channel you want, press the number. For example, for channel 5, press 5.



7

Press CURSOR \triangleright to start tuning.

The VCR starts searching for a channel and displays the first one it finds on the TV screen. Press CURSOR \leftarrow/\rightarrow repeatedly until the channel you want is displayed. The channels are scanned in the following order.



Channel coverage	Standard L	Standard BG
VHF	F2 - F70	E2 - E12 (A - H Italian model only)
UHF	F21 - F69	E21 - E69
CATV	B - Q	S0 - S20, S2 - S20
HYPER	S21 - S41	S21 - S41

For Canal Plus channel settings, see page 20 for details.

8

To allocate another channel to another programme position, repeat steps 5 and 6.

9

Press EXECUTE to store all the allocated channels.



Tuning the VCR to TV channels (EV-S9000E B only) (continued)

Tuning in French cable TV channels

This VCR scans CATV (cable TV) channels from B to Q and HYPER (PRESET menu) channels from S21 to S41. In the TUNER channel numbers, these channels are shown by their corresponding guide channel numbers, which run from 1 to 44. For example, channel B has guide channel number 1, whereas channel Q is indicated as number 23. (See the chart below.)

If a channel that you want to tune in is listed only by its frequency (e.g., 182.75 MHz), refer to the chart below for the corresponding guide channel number.

French cable TV channel chart

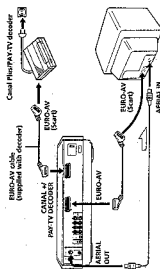
Channel	Guide channel number	Frequency range (MHz)
B	1	116.75 - 123.75
C	2	123.75 - 130.75
D	3	130.75 - 137.75
E	4	140.75 - 147.75
F	5	147.75 - 154.75
G	6	154.75 - 161.75
H	7	161.75 - 168.75
I	8	168.75 - 175.75
J	9	175.75 - 182.75
K	10	182.75 - 189.75
L	11	189.75 - 196.75
M	12	196.75 - 203.75
N	13	203.75 - 210.75
O	14	210.75 - 217.75
P	15	217.75 - 224.75
Q	16	224.75 - 231.75
R	17	231.75 - 238.75
S	18	238.75 - 245.75
T	19	245.75 - 252.75
U	20	252.75 - 259.75
V	21	259.75 - 266.75
W	22	266.75 - 273.75
X	23	273.75 - 280.75
Y	24	280.75 - 287.75
Z	25	287.75 - 294.75
AA	26	294.75 - 301.75
AB	27	301.75 - 308.75
AC	28	308.75 - 315.75
AD	29	315.75 - 322.75
AE	30	322.75 - 329.75
AF	31	329.75 - 336.75
AG	32	336.75 - 343.75
AH	33	343.75 - 350.75
AI	34	350.75 - 357.75
AJ	35	357.75 - 364.75
AK	36	364.75 - 371.75
AL	37	371.75 - 378.75
AM	38	378.75 - 385.75
AN	39	385.75 - 392.75
AO	40	392.75 - 399.75
AP	41	399.75 - 406.75
AQ	42	406.75 - 413.75
AR	43	413.75 - 420.75
AS	44	420.75 - 427.75
AT	45	427.75 - 434.75
AV	46	434.75 - 441.75
AW	47	441.75 - 448.75
AX	48	448.75 - 455.75
AY	49	455.75 - 462.75
AZ	50	462.75 - 469.75
BA	51	469.75 - 476.75
BB	52	476.75 - 483.75
BC	53	483.75 - 490.75
BD	54	490.75 - 497.75
BE	55	497.75 - 504.75
BF	56	504.75 - 511.75
BG	57	511.75 - 518.75
BH	58	518.75 - 525.75
BI	59	525.75 - 532.75
BJ	60	532.75 - 539.75
BK	61	539.75 - 546.75
BL	62	546.75 - 553.75
BM	63	553.75 - 560.75
BN	64	560.75 - 567.75
BO	65	567.75 - 574.75
BP	66	574.75 - 581.75
BQ	67	581.75 - 588.75
BR	68	588.75 - 595.75
BS	69	595.75 - 602.75
BT	70	602.75 - 609.75
BU	71	609.75 - 616.75
BV	72	616.75 - 623.75
BW	73	623.75 - 630.75
BX	74	630.75 - 637.75
BY	75	637.75 - 644.75
BZ	76	644.75 - 651.75
CA	77	651.75 - 658.75
CB	78	658.75 - 665.75
CC	79	665.75 - 672.75
CD	80	672.75 - 679.75
CE	81	679.75 - 686.75
CF	82	686.75 - 693.75
CG	83	693.75 - 700.75
CH	84	700.75 - 707.75
CI	85	707.75 - 714.75
CJ	86	714.75 - 721.75
CK	87	721.75 - 728.75
CL	88	728.75 - 735.75
CM	89	735.75 - 742.75
CN	90	742.75 - 749.75
CO	91	749.75 - 756.75
CP	92	756.75 - 763.75
CQ	93	763.75 - 770.75
CR	94	770.75 - 777.75
CS	95	777.75 - 784.75
CT	96	784.75 - 791.75
CU	97	791.75 - 798.75
CV	98	798.75 - 805.75
CW	99	805.75 - 812.75
CX	100	812.75 - 819.75
CY	101	819.75 - 826.75
CZ	102	826.75 - 833.75
DA	103	833.75 - 840.75
DB	104	840.75 - 847.75
DC	105	847.75 - 854.75
DD	106	854.75 - 861.75
DE	107	861.75 - 868.75
DF	108	868.75 - 875.75
DG	109	875.75 - 882.75
DH	110	882.75 - 889.75
DI	111	889.75 - 896.75
DJ	112	896.75 - 903.75
DK	113	903.75 - 910.75
DL	114	910.75 - 917.75
DM	115	917.75 - 924.75
DN	116	924.75 - 931.75
DO	117	931.75 - 938.75
DP	118	938.75 - 945.75
DQ	119	945.75 - 952.75
DR	120	952.75 - 959.75
DS	121	959.75 - 966.75
DT	122	966.75 - 973.75
DU	123	973.75 - 980.75
DV	124	980.75 - 987.75
DW	125	987.75 - 994.75
DX	126	994.75 - 1001.75
DY	127	1001.75 - 1008.75
DZ	128	1008.75 - 1015.75
EA	129	1015.75 - 1022.75
EB	130	1022.75 - 1029.75
EC	131	1029.75 - 1036.75
ED	132	1036.75 - 1043.75
EE	133	1043.75 - 1050.75
EF	134	1050.75 - 1057.75
EG	135	1057.75 - 1064.75
EH	136	1064.75 - 1071.75
EI	137	1071.75 - 1078.75
EJ	138	1078.75 - 1085.75
EK	139	1085.75 - 1092.75
EL	140	1092.75 - 1099.75
EM	141	1099.75 - 1106.75
EN	142	1106.75 - 1113.75
EO	143	1113.75 - 1120.75
EP	144	1120.75 - 1127.75
EQ	145	1127.75 - 1134.75
ER	146	1134.75 - 1141.75
ES	147	1141.75 - 1148.75
ET	148	1148.75 - 1155.75
EU	149	1155.75 - 1162.75
EV	150	1162.75 - 1169.75
EW	151	1169.75 - 1176.75
EX	152	1176.75 - 1183.75
EY	153	1183.75 - 1190.75
EZ	154	1190.75 - 1197.75
FA	155	1197.75 - 1204.75
FB	156	1204.75 - 1211.75
FC	157	1211.75 - 1218.75
FD	158	1218.75 - 1225.75
FE	159	1225.75 - 1232.75
FF	160	1232.75 - 1239.75
FG	161	1239.75 - 1246.75
FH	162	1246.75 - 1253.75
FI	163	1253.75 - 1260.75
FJ	164	1260.75 - 1267.75
FK	165	1267.75 - 1274.75
FL	166	1274.75 - 1281.75
FM	167	1281.75 - 1288.75
FN	168	1288.75 - 1295.75
FO	169	1295.75 - 1302.75
FP	170	1302.75 - 1309.75
FQ	171	1309.75 - 1316.75
FR	172	1316.75 - 1323.75
FS	173	1323.75 - 1330.75
FT	174	1330.75 - 1337.75
FU	175	1337.75 - 1344.75
FV	176	1344.75 - 1351.75
FW	177	1351.75 - 1358.75
FX	178	1358.75 - 1365.75
FY	179	1365.75 - 1372.75
FZ	180	1372.75 - 1379.75
GA	181	1379.75 - 1386.75
GB	182	1386.75 - 1393.75
GC	183	1393.75 - 1400.75
GD	184	1400.75 - 1407.75
GE	185	1407.75 - 1414.75
GF	186	1414.75 - 1421.75
GG	187	1421.75 - 1428.75
GH	188	1428.75 - 1435.75
GI	189	1435.75 - 1442.75
GJ	190	1442.75 - 1449.75
GK	191	1449.75 - 1456.75
GL	192	1456.75 - 1463.75
GM	193	1463.75 - 1470.75
GN	194	1470.75 - 1477.75
GO	195	1477.75 - 1484.75
GP	196	1484.75 - 1491.75
GQ	197	1491.75 - 1498.75
GR	198	1498.75 - 1505.75
GS	199	1505.75 - 1512.75
GT	200	1512.75 - 1519.75
GU	201	1519.75 - 1526.75
GV	202	1526.75 - 1533.75
GW	203	1533.75 - 1540.75
GX	204	1540.75 - 1547.75
GY	205	1547.75 - 1554.75
GZ	206	1554.75 - 1561.75
HA	207	1561.75 - 1568.75
HB	208	1568.75 - 1575.75
HC	209	1575.75 - 1582.75
HD	210	1582.75 - 1589.75
HE	211	1589.75 - 1596.75
HF	212	1596.75 - 1603.75
HG	213	1603.75 - 1610.75
HH	214	1610.75 - 1617.75
HI	215	1617.75 - 1624.75
HJ	216	1624.75 - 1631.75
HK	217	1631.75 - 1638.75
HL	218	1638.75 - 1645.75
HM	219	1645.75 - 1652.75
HN	220	1652.75 - 1659.75
HO	221	1659.75 - 1666.75
HP	222	1666.75 - 1673.75
HQ	223	1673.75 - 1680.75
HR	224	1680.75 - 1687.75
HS	225	1687.75 - 1694.75
HT	226	1694.75 - 1701.75
HU	227	1701.75 - 1708.75
HV	228	1708.75 - 1715.75
HW	229	1715.75 - 1722.75
HX	230	1722.75 - 1729.75
HY	231	1729.75 - 1736.75
HZ	232	1736.75 - 1743.75
IA	233	1743.75 - 1750.75
IB	234	1750.75 - 1757.75
IC	235	1757.75 - 1764.75
ID	236	1764.75 - 1771.75
IE	237	1771.75 - 1778.75
IF	238	1778.75 - 1785.75
IG	239	1785.75 - 1792.75
IH	240	1792.75 - 1799.75
II	241	1799.75 - 1806.75
IJ	242	1806.75 - 1813.75
IK	243	1813.75 - 1820.75
IL	244	1820.75 - 1827.75
IM	245	1827.75 - 1834.75
IN	246	1834.75 - 1841.75
IO	247	1841.75 - 1848.75
IP	248	1848.75 - 1855.75
IQ	249	1855.75 - 1862.75
IR	250	1862.75 - 1869.75
IS	251	1869.75 - 1876.75
IT	252	1876.75 - 1883.75
IU	253	1883.75 - 1890.75
IV	254	1890.75 - 1897.75
IV	255	1897.75 - 1904.75
IV	256	1904.75 - 1911.75
IV	257	1911.75 - 1918.75
IV	258	1918.75 - 1925.75
IV	259	1925.75 - 1932.75
IV	260	1932.75 - 1939.75
IV	261	1939.75 - 1946.75
IV	262	1946.75 - 1953.75
IV	263	1953.75 - 1960.75
IV	264	1960.75 - 1967.75
IV	265	1967.75 - 1974.75
IV	266	1974.75 - 1981.75
IV	267	1981.75 - 1988.75
IV	268	1988.75 - 1995.75
IV	269	1995.75 - 2002.75
IV	270	2002.75 - 2009.75
IV	271	2009.75 - 2016.75
IV	272	2016.75 - 2023.75
IV	273	2023.75 - 2030.75
IV	274	2030.75 - 2037.75
IV	275	2037.75 - 2044.75
IV	276	2044.75 - 2051.75
IV	277	2051.75 - 2058.75
IV	278	2058.75 - 2065.75
IV	279	2065.75 - 2072.75
IV	280	2072.75 - 2079.75
IV	281	2079.75 - 2086.75
IV	282	2086.75 - 2093.75
IV	283	2093.75 - 2100.75
IV	284	2100.75 - 2107.75
IV	285	2107.75 - 2114.75
IV	286	2114.75 - 2121.75
IV	287	2121.75 - 2128.75
IV	288	2128.75 - 2135.75
IV	289	2135.75 - 2142.75
IV	290	2142.75 - 2149.75
IV	291	2149.75 - 2156.75
IV	292	2156.75 - 2163.75
IV	293	2163.75 - 2170.75
IV	294	2170.75 - 2177.75
IV	295	2177.75 - 2184.75
IV	296	2184.75 - 2191.75
IV	297	2191.75 - 2198.75
IV	298	2198.75 - 2205.75
IV	299	2205.75 - 2212.75
IV	300	2212.75 - 2219.75
IV	301	2219.75 - 2226.75
IV	302	2226.75 - 2233.75
IV	303	2233.75 - 2240.75
IV	304	2240.75 - 2247.75
IV	305	2247.75 - 2254.75
IV	306	2254.75 - 2261.75
IV	307	2261.75 - 2268.75
IV	308	2268.75 - 2275.75
IV	309	2275.75 - 2282.7

Setting the Canal Plus/PAY-TV decoder

(EV-S9000E BINP/VC only)

You can watch or record Canal Plus or PAY-TV programmes if you connect a decoder (not supplied) to the VCR.

How to hook up

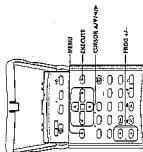


Notes

- If you direct see 21 pin connector, you must connect the decoder's VCR and VCR connector, your cannot switch Canal Plus or PAY-TV programmes received via the TV.
- You cannot record either of these inputs, with either of these inputs.
- Whether satellite are the input or not depends on the decoder.
- If you've connected your VCR to the TV with an S-VIDEO connector, you must connect the TV's S-VIDEO connector to the TV's S-VIDEO connector using a supplied S-video and audio cables. To switch the TV's S-VIDEO input, you must use the supplied S-video and audio cables.

If your TV has a EURO-AV connector Set the EURO-AV OUT menu option to NORM. This hookup allows you to display subtitles, but the VCR does not transmit Y/C signals.

If your TV has a EURO-AV connector and is S-VIDEO compatible Set the EURO-AV OUT menu option to S-VIDEO. This hookup does not allow you to display subtitles and some TV's may not display black and white screen. If this is the case, set the TV to S-VIDEO input.



Note

- The on-screen information varies among different models.

Presetting Canal Plus/PAY-TV channels

To watch or record Canal Plus/PAY-TV programmes, set your VCR to receive the channels using the on-screen display.

- Turn on your decoder.
- Lift the cover of the remote commander and press MENU. The following menu appears on the TV screen.



- Press CURSOR Δ/∇ to move the cursor \blacktriangleright to TUNER PRESET, then press EXECUTE.

ITEM	VALUE	ITEM	VALUE
TUNER PRESET	000000	CHANNEL LIST	000000
CHANNEL LIST	000000	LANGUAGE	000000
LANGUAGE	000000	VIDEO	000000
VIDEO	000000	VIDEO	000000
VIDEO	000000	VIDEO	000000

(EV-S9000E BINP only)

- Press the PROG \pm buttons to select the desired programme position.

ITEM	VALUE	ITEM	VALUE
TUNER PRESET	000000	CHANNEL LIST	000000
CHANNEL LIST	000000	LANGUAGE	000000
LANGUAGE	000000	VIDEO	000000
VIDEO	000000	VIDEO	000000
VIDEO	000000	VIDEO	000000

(EV-S9000E BINP only)

- Press CURSOR Δ/∇ to move the cursor \blacktriangleright to CHANNEL SET, then tune in the Canal Plus or PAY-TV channels.

ITEM	VALUE	ITEM	VALUE
TUNER PRESET	000000	CHANNEL LIST	000000
CHANNEL LIST	000000	LANGUAGE	000000
LANGUAGE	000000	VIDEO	000000
VIDEO	000000	VIDEO	000000
VIDEO	000000	VIDEO	000000

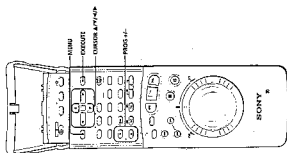
(EV-S9000E BINP only)

- Press CURSOR Δ/∇ \blacktriangleright to move the cursor \blacktriangleright to CANAL PLUS (for the EV-S9000E BINP only) or PAY-TV (for the EV-S9000E VC only) and set to ON, then press EXECUTE.

ITEM	VALUE	ITEM	VALUE
TUNER PRESET	000000	CHANNEL LIST	000000
CHANNEL LIST	000000	LANGUAGE	000000
LANGUAGE	000000	VIDEO	000000
VIDEO	000000	VIDEO	000000
VIDEO	000000	VIDEO	000000

(EV-S9000E VC only)

Additional tuning instructions



If the picture is not clear

Normally, the Auto Fine Tuning (AFT) function automatically tunes in channels correctly. If, however, the picture is not clear, you may also use the following functions:

- 1 Press PROG +/- to select the programme number for which you cannot obtain a clear picture.
- 2 Press MENU, then select TUNER PRESET and press EXECUTE.
- 3 Select FINE TUNING. The fine tuning meter appears.



- 4 Press CURSOR </> to get a clearer picture, then press EXECUTE. Note that the AFT (Auto Fine Tuning) setting switches to OFF.

If the TV signal is too strong

Set the LOCAL/DX switch on the rear of the VCR to LOCAL.

Disabling unwanted programme positions

After tuning the TV channels, you can disable unused programme positions. Positions that are disabled will be skipped later when you press the PROG +/- buttons.

- 1 Press MENU, then select TUNER PRESET and press EXECUTE.
- 2 Press PROG +/- until the programme position you want to disable appears beside "PROG" on the TV screen.
- 3 Press number button "0" twice to display the number "0" beside CHANNEL SET.
- 4 Repeat steps 2 and 3 for other positions you want to disable.
- 5 Press EXECUTE.

Basic Operations

Playing a tape

This section shows you how to play back a video tape.

1 Turn on your TV and tune in to the VCR:

- If the TV is connected to the VCR using the EURO-AV cable, the S-cable, or AV cable, set the TV to video input.
- If the TV is connected to the VCR using only the aerial cable, set the TV to the programme position for the VCR.

2 Insert a tape.

The VCR turns on automatically.

3 Press <▶> PLAY to start playing.

When the tape reaches the end, the VCR automatically reverts to the beginning. (The power remains on.)

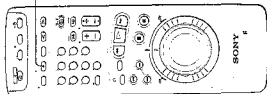
Additional tasks

To	Press
Stop play	■ STOP
Pause play	■ PAUSE
Resume play after pause	■ PAUSE or <▶> PLAY
Search forward	Press the JOG/SHUTTLE button, then turn the JOG/SHUTTLE ring to <▶> during playback
Search backward	Press the JOG/SHUTTLE button, then turn the JOG/SHUTTLE ring to <◀> during playback
Fast-forward the tape	>>> FF during stop
Revised the tape	<<< REV during stop
Revised the tape at high speed	<<<< H-STEP REV

Tip

- For further information on searching and playback functions, see "Playing/Searching" on page 38.

Playing a tape (continued)



Notes

- When you play a tape, the VCR records the audio signal and outputs it to the AUDIO MONITOR setting, regardless of the AUDIO MONITOR setting.
- If you want to hear the audio signal from the tape, you must use the EURO-AV connector or a LINE connection.

Selecting playback sound of stereobilingual tapes

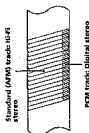
Press AUDIO MONITOR on the remote commander to select the desired output. Each press of the button changes the display on the VCR and TV screen.

Stereo programmes		
To listen to	Press AUDIO MONITOR until	The display window shows
Stereo sound	"STEREO"	"STEREO"
Left channel	"L"	"L"
Right channel	"R"	"R"

Bilingual programmes		
To listen to	Press AUDIO MONITOR until	The display window shows
Main sound	"MAIN"	"MAIN"
Sub sound	"SUB"	"SUB"
Main and sub sounds	"MAIN/SUB"	"MAIN SUB"

How sound is recorded on a video tape

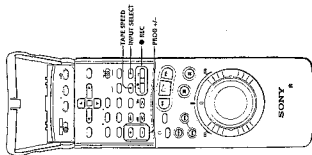
This VCR records sound on two tracks: the audio tracks. High-fidelity sound is recorded on the left and right channels. The standard (AFM) track along with the picture. PCM (digital sound) is recorded onto the PCM track along the edge of the tape.



Recording TV programmes

Note

- When you have connected your TV to your VCR using the EURO-AV cable, make sure you have set the TV to receive in the SET UP MENU to MONI. However, if your TV has a 5 inputs setting, then you must set the TV to receive in the SET UP MENU to 5.



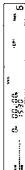
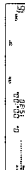
Tip

- To select programme numbers, use the number buttons on the remote commander. For the first 99 programmes, press the 1-9 number buttons followed by the number buttons.

This section shows you how to record TV programmes in the most basic way: manual recording. With manual recording, you start the VCR recording when the programme begins, then stop it when the programme ends. The VCR also provides the following ways of recording:

- Automatic start and stop recording—Recording
- Automatic start and stop recording—Recording TV programmes using the timer (page 32)

- Turn on your TV and tune in to the VCR.
 - If the TV is connected to the VCR using the EURO-AV cable, S cable, or AV cable, set the TV to video input.
 - If the TV is connected to the VCR using only the aerial cable, set the TV to the programme position for the VCR.
 When using a decoder, turn it on and set the VCR to the programme position you want to record.
- On the operation panel, set the PCM REC LEVEL control to "5" and the PCM REC BALANCE control to the centre.
- Insert a tape with the safety tab slid back so that the red portion does not show.
- Press INPUT SELECT until a programme position appears in the VCR's display window.
- Select the desired programme position by pressing PROG +/-.



- Start recording by pressing ● REC.

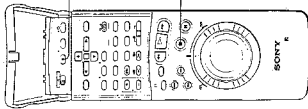
When the tape reaches the end, the VCR automatically rewinds it to the beginning.

Recording TV programmes (continued)

- Notes**
- If you insert a cassette with its safety tab set to allow the red position, the VCR starts it when you press **REC**.

Tips

- To cut out an unwanted part of a programme, press **PAUSE** from the **STOP** position. The VCR will record the programme in the normal way, but the unwanted scene, then press **PAUSE** to resume.
- The display appears on the TV screen indicating the time remaining about the tape. You can see the time left when the recording is finished.
- If you don't want to watch a programme, you can turn off the TV. When using a decoder, make sure to leave it on.



To stop recording Press **STOP**.

To select tape speeds
When recording, either **SP** or **LP** provides recording time for 30 minutes. The **SP** provides better picture quality. You can mix **SP** and **LP** on the same tape. When playing back, the VCR automatically detects the tape speed. See the table below for the maximum recording/playback time in each speed.

Maximum recording/playback time	
Tape type	SP LP
ES/FS-30	30 min. 1 hr.
ES/FS-60	1 hr. 2 hrs.
ES/FS-90	1 hr. 30 min. 3 hrs.
ES-120	2 hrs. 4 hrs.

If you use other types of tapes than those listed above, the remaining tape length may not be displayed correctly.

Recording using the quick timer

The quick timer enables you to record for a specified period of time in intervals of 30 minutes. Once you specify the recording time, the VCR automatically stops recording. Below you begin, check that the clock is set correctly.

After you start recording, press **QUICK TIMER** on the operation panel until the desired duration appears in the display window. The **TIMER** indicator on the VCR lights up. Each press increases the recording duration in increments of 30 minutes as shown below.

0:00 → 0:30 → 1:00 → ... → 5:30 → 6:00

The recording duration decreases minute by minute to 0:00, then the VCR turns off automatically.

To stop recording
To stop quick-timer recording while the VCR is recording a programme, press **TIMER REC ON/OFF** to turn off the **TIMER** indicator on the VCR.

To extend the recording duration while recording
Press **QUICK TIMER** until the desired duration appears in the display window.

Watching a TV programme while recording another
You can watch a TV programme and record another at the same time.

- 1 Press **PAUSE** to cut out the programme commander to turn off the VTR indicator in the display window.
- 2 Select the desired programme position on the TV.

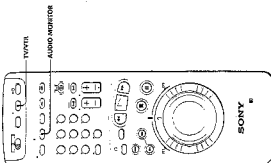
Recording stereo and bilingual programmes: in ZWEITON (German stereo) system (EV-S9000E AEI NPVC only)

This VCR automatically receives and records stereo and bilingual programmes in the ZWEITON system. The stereo programmes are recorded in the **STEREO** position in the display window. When bilingual programmes are received, the **MAIN** indicator appears in the display window.

To monitor bilingual programmes while recording
Press **AUDIO MONITOR** to select the desired sound.

To listen to	Press AUDIO MONITOR until	The TV screen shows	The display window shows
Main sound	"MAIN"	"MAIN"	"MAIN"
Sub sound	"SUB"	"SUB"	"SUB"
Main and sub sounds	"MAIN/SUB"	"MAIN/SUB"	"MAIN SUB"

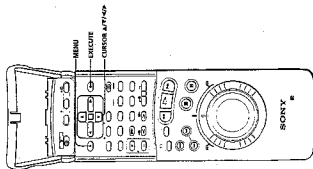
Note
To watch Canal Plus or TV wide recording then, set the TV to video input.



Note

- The **AUDIO MONITOR** button doesn't work while the programme is in ZWEITON system.

Recording TV programmes (continued)



Recording stereo and bilingual programmes: in NICAM system (EV-59000E NPIUB only)

This VCR receives and records stereo and bilingual programmes based on the NICAM system. When NICAM broadcasts are received, the BINGO indicator appears in the display window; when stereo and bilingual broadcasts are received, the NICAM indicator lights up in the display window.

1 Press MENU and select SET UP MENU.



2 Set NICAM to ON by pressing CURSOR \blacktriangle / \blacktriangledown .



3 Press EXECUTE to store the setting.

Using the NICAM setting, NICAM broadcasts are recorded as in the following table.

Track	Sound recorded		Bilingual
	PCM	Left channel	Main
PCM	Right channel	Right channel	Sub
AFM (HIFI)	Left channel	Standard	Standard
AFM (HIFI)	Right channel	Standard	Standard

Tip
When you set NICAM to ON, the sound recorded on the PCM track and the standard sound is recorded on the AFM track.

To monitor stereo and bilingual programmes while recording
Set MONITOR to ON. Use the AUDIO MONITOR switch on the operation panel to select the desired sound.

Stereo programmes

To listen to	Set the AUDIO MONITOR switch to	The TV screen and the display window show
Stereo sound	PCM	"STEREO"
Standard sound	AFM (HIFI)	No indication

Bilingual programmes

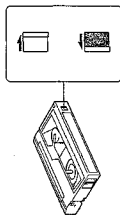
Use the AUDIO MONITOR button on the remote commander to select the desired sound.

To listen to	Set the AUDIO MONITOR switch to	The TV screen and the display window show
Main sound		"MAIN"
Sub sound	PCM	"SUB"
Main and sub sounds		"MAIN/SUB"
Standard sound	AFM (HIFI)	No indication

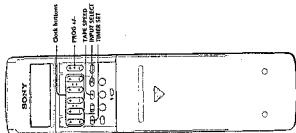
Saving a recording

Video tapes have a safety tab to protect against accidental recording. To prevent accidental erasure of a recording, slide out the tab on the cassette so that the red portion is visible. A tape with its safety tab in this position ejects if you try to record on it.

To record on a tape, slide the tab so that the red portion is not visible.



Recording TV programmes using the timer

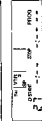


This section shows you how to let the VCR automatically start and stop recording TV programmes. You can preset up to eight programmes within a one month time frame.

Before you start:

- Check the clock is set correctly.
 - Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
 - Turn on your TV and tune in to the VCR.
- When using a decoder, turn it on.

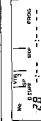
1 Slide down the back cover of the remote commander and press TIMER SET.



2 Set the date to start recording by pressing D +/-.

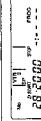
The day of the week is set automatically.

To record the same programme every day or the same day once a week, see 'Daily/weekly recording' on page 28.

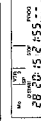


3 Set the time to start recording.

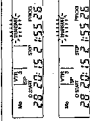
- 1 Press START M +/- to set the time.
- 2 Press START M +/- to set the minutes.



4 Set the time to stop recording by pressing STOP M +/- and M +/-.

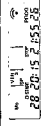


- 5 Select the programme position by pressing PROG +/-, if you want to record via the LINE IN jacks, press INPUT SELECT. To select the desired tape, select the desired tape. See 'To select tape' on page 28.



6 Point the remote commander at the VCR and press TRANSMIT to store the setting in the VCR's memory.

A beep sound indicates that the programme has been transmitted to the VCR, and the TIMER indicator on the VCR lights up. The VCR will start recording automatically, and enters timer recording standby mode. To record another timer setting, repeat steps 2 to 6. When using a decoder, leave it on. The VCR automatically turns on and starts recording at the preset start time, and turns off at the preset stop time.



7 Press TIMER SET.

The remote commander displays the time and date.



To stop recording

To stop the VCR is recording a programme, press TIMER REC ON/OFF to turn off the TIMER indicator on the VCR.

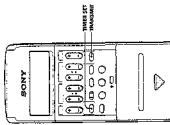
To use the VCR while recording

You can do the following tasks during timer recording.

To	Press
Reset the counter to "HOMES"	COUNTER RESET
Display tape information on the TV screen	DISPLAY
Check the timer settings	TIMER ON/SCREEN
Watch another TV programme	TV/VTR On - "Watching a TV programme while recording another" on page 28.

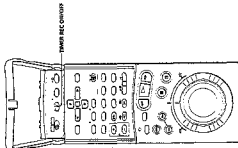
Tip

- To change or correct the setting before transmitting it, press the buttons for the item you want to change.

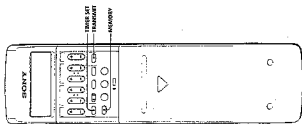


Note

- If the power is interrupted for more than one hour while recording, the timer settings are cleared. Reset the timer.



Recording TV programmes using the timer (continued)



Storing frequently used settings in the remote commander

The items selected for one timer recording programme are erased from the remote commander when a new timer recording programme is selected from the programme list when recording has finished as per the settings you have made. However, the START/STOP time and programme position of up to four programmes can be stored in the remote commander and be recalled later. This enables you to quickly access the most frequently used settings, especially your favourite weekly programmes. The recording date is automatically shifted to the next week after this week's recording is finished.

- 1 Press **TIMER SET**, then press **RECALL** on the remote commander. The **TIMER SET** indicator lights up in the remote commander display window.
- 2 Enter all of the settings for the programme you wish to record. To do this, repeat steps 1 to 5 under "Recording TV programmes using the timer" on page 32.
- 3 Press **MEMORY**.
- 4 To enter other programmes, press **MEMORY** to light the **MEMORY** and **3**.
- 5 Press **TIMER SET**.

To recall or change memory settings

- 1 Press **TIMER SET**.
- 2 Press **MEMORY** to call up the desired indicator **A**, **B**, **C**, or **D**.
- 3 Make whatever changes necessary.
- 4 Press **MEMORY** again, then press **TIMER SET**.
- 5 The VCR enters timer recording standby.

Using the VCR before timer recording begins

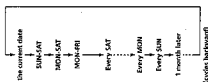
Press **TIMER REC ON/OFF** to turn off the **TIMER** indicator on the VCR, then press **0** (out standby). The VCR is ready for use.

After setting the VCR, press **TIMER REC ON/OFF** again to turn on the **TIMER** indicator on the VCR. Remember to reset the VCR to stand by for recording before the time you've set the VCR to start recording, or the timer setting will be cancelled.

Daily/weekly recording

Daily recording records the same programme every day of the week; weekly recording records the same programme on the same day, every week.

When you set the date to start recording in step 2 of "Recording TV programmes using the timer", press **D** until the desired day appears. Each time you press the button, the indication changes as shown on the left.



Timer recording with VPS signals (EY-S9000E VC only)

The broadcast system transmits VPS (Video Programme System) signals with its TV programmes. These signals ensure that your timer recording will be made correctly even if there are any changes or broadcast interruptions. When setting the timer, you also need to enter the start and stop times exactly as indicated in the TV programme guide, otherwise the VPS function will not work.

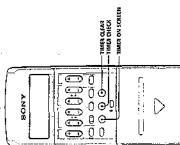
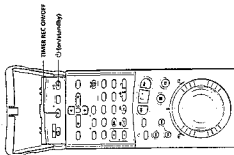
- 1 If the **TIMER** indicator on the VCR is lit, press **TIMER REC ON/OFF** on the VCR to release the VCR from standby and turn off the indicator.
 - 2 Press **0** to turn on the VCR.
 - 3 Press **TIMER SET** on the VCR.
 - 4 If you turned off the **TIMER** indicator in step 1, press **TIMER REC ON/OFF** on the VCR.
- The VCR returns to recording standby. Once you switch on the VPS function, it works on all timer settings that are set to programmes with VPS signals.



Notes

- If the recording times overlap due to a VPS timer shift, the programme that was recorded first has priority.
- The second programme then begins to record daily when the first programme has finished.
- If the VPS signal is two week or the broadcasting station does not transmit VPS signals, the VCR will record the programme without using the VPS function even if the VPS indicator is lit in the display window.

Checking/cancelling timer settings



This section shows you how to check and cancel the timer settings after you've stored them in the VCR.

Before you start...

- Turn on your TV and tune in to the VCR.

1 Press TIMER REC OFF to turn off the TIMER indicator on the VCR.

2 Press \odot (standby) to turn on the VCR.

3 Slide down the back cover of the remote commander, and press TIMER CHECK to display the PROGRAM LIST on the TV screen.

4 Check the timer settings in the PROGRAM LIST.

- If you do not want to cancel the settings, press TIMER ON SCREEN, then TIMER REC ON/OFF to return to recording standby.
- If you want to cancel the settings, press TIMER CHECK to move the cursor to the setting you want to cancel.

5 Cancel the timer setting:

To cancel the setting, press TIMER CLEAR, then TIMER ON SCREEN. The VCR returns to the original screen. If there are any other timer settings left in the PROGRAM LIST, press TIMER REC ON/OFF to return to recording standby.

To check the timer settings during timer recording

Press TIMER ON SCREEN to turn the PROGRAM LIST on or off.

When the timer settings overlap

The VCR will not record overlapping programmes. If any of your timer settings overlap, change the settings.

Time...

Case 1: If you preset two programmes to start recording at the same time...

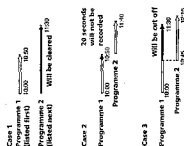
The programme listed first on the PROGRAM LIST has priority over the other programmes. The timer settings of lower priority programmes will be erased from the PROGRAM LIST when the first programme begins recording.

Case 2: If you preset programme 2 to start recording at the same time you preset programme 1 to finish recording...

The last 20 seconds of programme 1 will not be recorded because the VCR will enter recording phase for programme 2 before programme 1 is finished.

Case 3: If you preset programme 2 to start recording before programme 1 is finished recording...

Programme 2 will start recording before programme 1 has finished.



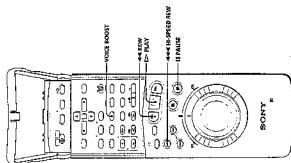
Additional Operations Playing/searching at various speeds

You can play back a tape at various speeds: high-speed, slow motion, frame by frame and so on. These options are also useful for searching for a specific point during playback. The sound is muted during these operations.

Playback options	Operation	To resume normal playback
Playing at various speeds	During playback, turn the SHUTTLE ring right or left to the desired speed.	Release the ring and press ▶ PLAY .
Normal speed	One-third the normal speed	1/3
High-speed	Twice the normal speed	X2
Fast-forwarding/rewinding	Press ▶ or ◀ during playback.	Press ▶ PLAY .
Viewing the picture during fast-forward or fast-rewind	During fast-forward, press ▶ FF or to ▶ REW and release.	Press ▶ PLAY .
Locking in a high-speed picture	During fast-forward or rewind, press ▶ FF forward or ▶ REW backward.	Press ▶ PLAY .
Locking in a slow-motion picture	During playback or pause, press ▶ SLOW . To change direction, press ▶ FRAME (backward) or ▶ FRAME (forward).	Press ▶ PLAY .
Flipping frame by frame	During pause, press ▶ FRAME to advance the picture one frame or ▶ FRAME to reverse the picture one frame.	Press ▶ PLAY .
Flipping in reverse	During playback, press ▶ FRAME .	Press ▶ PLAY .
Replaying a scene	During playback, first press ▶ FRAME to advance the picture one frame, then press ▶ FRAME to return to the beginning of the scene.	Press ▶ PLAY .

Tip: You can improve picture quality during playback at various speeds. See page 42.

Note: When you are displaying the **TIME CODE** or counting the tape length on the counter, you can't use the **▶** **FRAME** or **▶** **FRAME** buttons.



Listening more easily to conversation recorded with a video camera

When you play a tape recorded with a video camera, you can reduce external noises (such as wind and traffic sounds), and amplify the human voice portion of the audio by using the **VOICE BOOST** function.

- 1 Press **VOICE BOOST** on the remote commander.
- 2 To listen to a tape in normal audio, press **VOICE BOOST** again to cancel the function.

The **VOICE BOOST** indicator on the VCR goes out.

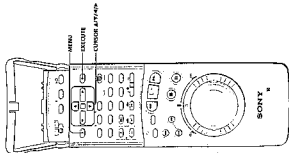
Note

- When rewinding at high speed, you will not see the picture. The picture will be resumed to the beginning of the last counter display.

Notes

- If you use **VOICE BOOST** on a tape recorded with a video camera, the audio portion of the tape will be amplified. This may cause distortion or noise.
- The **VOICE BOOST** function operates in standard full-track and doesn't function in standard half-track or full-track.

Adjusting the picture



On this VCR you can adjust the colour, sharpness, and the Y/C delay. You can adjust the picture to suit your own viewing pleasure during regular tape playback. You can also adjust the tracking for slow-motion forward and reverse, and for two-times speed playback. (See page 42.) Using this menu option you can make the following picture:

- COLOUR to adjust skin colour and colour tone and depth etc.
- SHARPNESS to obtain a clearer more precise picture.
- Y/C DELAY to adjust colour on the right or left portions of the picture.

Example of SHARPNESS adjustment

1 Press MENU.



2 Press CURSOR A/T to move the cursor (P) to PICTURE ADJUST.



3 Press EXECUTE. The PICTURE ADJUST options appear.



4 Press CURSOR A/T to move the cursor (P) to SHARPNESS.



Note
The delay signal is divided into Y (Brightness element) and C (Colour element). The time delay (PT) between the two elements is known as "Y/C delay."

5 Press CURSOR A/T to move the tracking bar (H) to adjust the sharpness.



6 Press EXECUTE. The sharpness adjustment appears on the screen.



7 To store your settings in memory, follow steps 1 to 3, then make your settings, then do the following:

- 1 Press CURSOR A/T to move the cursor (P) to WRITE MEMORY.
- 2 Press EXECUTE to enter the settings.

To recall your stored settings, press RECALL MEMORY.

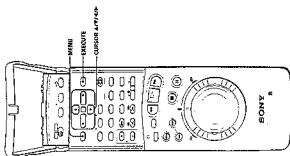
When you want to change settings, press CURSOR A/T to move the cursor (P) to WRITE MEMORY. Press EXECUTE to store the settings. The settings are automatically reset to the default settings as adjusted at the factory at the time of shipment.



Notes

- The Y/C delay, which is set to ON, the PICTURE ADJUST settings are automatically set to default.
- The Y/C delay settings are adequate unless the tape is of poor quality or recording was made on another VCR.

Adjusting the picture (continued)



The VCR automatically adjusts the picture for the best possible playback or recording. However, if you find the automatic adjustment unsatisfactory, you can adjust the picture manually.

Adjusting the tracking

Though the VCR automatically adjusts the tracking when playing a tape, distortion may occur if the tape was recorded in poor conditions. If so, manually adjust the tracking condition during SLOW, SLOW, or X2 playback. The tracking can only be adjusted automatically during normal playback.

1 Press MENU.



2 Press CURSOR Δ /V/ ∇ /P to move the cursor (P) to TRACKING ADJUST.



3 Press EXECUTE.



4 Press CURSOR Δ /V/ ∇ /P to move the cursor (P) to the tracking adjustment position you wish to select (SLOW, SLOW, or X2).



- To adjust tracking when in forward slow motion, select SLOW.
- To adjust tracking when in reverse slow motion, select SLOW.
- To adjust tracking when in X2 (two-times speed), select X2.

5 Press CURSOR Δ /V/ ∇ /P to move the cursor (P) to adjust the tracking for the mode you are in.



6 Press EXECUTE.

Reducing picture noise

When you play a tape that is in poor condition you can improve the playback quality by using the NR (Noise Reduction) function.

To change NR settings

Press NR to select the desired setting:

When	NR level	NR indicator in the operation panel display	The TV screen shows
In normal playback (usually at this setting)	NORMAL	Lights up	"NR STD"
You want to reduce noise as much as possible	MAXIMUM	Lights up	"NR MAX"
You want a clear picture outline even with the existing noise	Off	No indication	"NR OFF"

Notes

- When the NR indicator is lit, adjusting the tracking bar (P) to the center position and try again.
- When the NR indicator is lit, slow motion, even if you have adjusted the tracking, the picture may flicker and the sound may be lost.

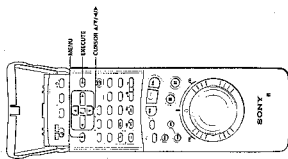
Notes

- When changing the NR setting, the VCR will stop for approximately 3 seconds for the new setting to allow on the TV screen.
- If the NR indicator is lit, the SET UP MENU, you cannot use the NR function.

Searching using the index function - Index search

Notes

- You can't make an index signal when you start recording, when recording is in progress, or when you are in a recording pause. You can make an index signal if the VCR is in a standby state.
- Leads in a standard LP mode are 2 seconds for SP mode, and at least 4 seconds for LP mode. The VCR can't detect the signal correctly.
- An index signal is a 10% burst of the first second of the first frame. The VCR can't detect the signal correctly if the first frame is not present.



An index signal is automatically recorded at the beginning of a scene when you start recording. You can find specific scenes easily using the index search function. There are two kinds of index searches you can make, "Normal" and "Date". You can use the "date" index for real only.

How the index function works

The index marks as a divider between scenes, and is not numbered. So, when you specify the index mark, later, you have to specify the relative position from the current position.



Locating an index by number - "normal" INDEX SEARCH

Locate an index by indicating how many index signals ahead or behind the scene is from the tape's current position. You can specify up to 19 index points either ahead or behind the current position. See "Looking at menu options" on page 48 to set the INDEX menu option.

- 1 Insert an indexed tape into the VCR, then press MENU.



- 2 Press CURSOR A/V 4/9 to move the cursor (P) to SET UP MENU, then press EXECUTE.



- 3 Press CURSOR A/V 4/9 to move the cursor (P) to INDEX SEARCH, then highlight NORM.



- 4 Press <4> to INDEX SEARCH repeatedly until the index number you want appears on the TV screen:

- To locate succeeding programmes, press >>> INDEX SEARCH.

- To locate preceding programmes, press <<< INDEX SEARCH.

- The VCR starts searching and the index number on the TV screen counts down to zero in the order in which the indices were dated. Playback starts automatically from that point.

You can locate a desired scene by date if the tape you are using was recorded on by a video camera that has the INDEX function. You can call up to 19 index points either ahead or behind the current position. See "Looking at menu options" on page 48 to set the INDEX menu option.

Locating an index by date - "date" INDEX SEARCH

You can locate a desired scene by date if the tape you are using was recorded on by a video camera that has the INDEX function. You can call up to 19 index points either ahead or behind the current position. See "Looking at menu options" on page 48 to set the INDEX menu option.

- 1 Insert an indexed tape into the VCR, then press MENU.



- 2 Press CURSOR A/V 4/9 to move the cursor (P) to SET UP MENU, then press EXECUTE.



- 3 Press CURSOR A/V 4/9 to move the cursor (P) to INDEX SEARCH, then select DATA.

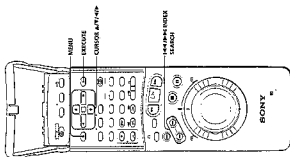


- 4 Press <4> to INDEX SEARCH repeatedly until the index number you want appears on the TV screen:

- To locate succeeding programmes, press >>> INDEX SEARCH.

- To locate preceding programmes, press <<< INDEX SEARCH.

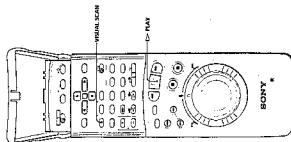
The VCR starts searching and the index number on the TV screen counts down to zero in the order in which the indices were dated. Playback starts automatically from that point.



Searching - Index search (continued)

Notes

- If the tape you are using has been recorded in the visual scan function doesn't work.
- If the first scene appears in black and white the other scenes will also be in black and white.
- After you press VISUAL SCAN, the VCR will start recording, but no picture displays "SEARCH".
- When using the Visual Scan function, the first few seconds of the tape may not be displayed.



Locating up to 9 index points visually - VISUAL SCAN

Using the visual scan function you can find and play a programme you've marked with an index signal. You can view up to 9 different scenes on the TV screen at the same time. Either numbered or dated indexed scenes can be viewed. When you want to find a scene but don't know the exact location you can find it by using this function. You can view up to 9 scenes on the TV screen to search for the desired scene.

1 Press VISUAL SCAN while in stop mode.

The VCR will search for the next index signal automatically. When the next index signal is found, the VCR will stop and display the scene number on the TV screen. The first 1 scene appears on the TV screen. The VCR then fast-forwards to the next index signal. After 9 scenes are displayed on the TV screen the VCR stops searching for index signals.



Scene 1	Scene 2	Scene 3
Scene 1	Scene 2	Scene 3
Scene 4	Scene 5	Scene 6
Scene 7	Scene 8	Scene 9

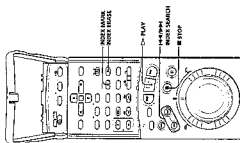
2 Press VISUAL SCAN again to view the next (10th) index signal in the 1 position.

When you see the scene you want to view, press Δ PLAY.

Scene 10
Scene 10

Notes

- When you mark an index signal, the recorded sound may be interrupted and a black bar appears on the TV screen. However, the tape will not be damaged.
- When you mark an index signal, the VCR will stop for 2 seconds for 1P mode, and at least 4 seconds for 2P mode, so that the VCR can correct the signal correctly.
- If you mark or erase an index signal on a tape that has been recorded in the 2P mode, the date codes may be erased.
- When you mark or erase an index signal on a cassette tape, the date codes may be erased.
- Index signals on cassettes that have their safety lock in the red position.



Note

- You can't erase index signals that have been recorded on the tape, or those on tapes marked by a video camera or other VCR.

Marking index signals

You can mark and index anywhere on a tape so that you can easily find the specific point later on. Press INDEX MARK while in recording or playback mode.



This VCR cannot mark a "date" index.

Erasing index signals

You can remove any unwanted "normal" index signals using this function. However, you can't erase "date" index signals.

1 Press Δ INDEX SEARCH while in stop or playback mode.

The VCR rewinds or fast-forwards the tape automatically and playback starts when the first index signal is indicated on the TV screen reaches 0.

2 Press INDEX ERASE during the 10-second preview for the index you want to erase. To stop erasing index signals, press Δ PLAY or Δ STOP.



Looking at menu options

The SET UP MENU provides you with various options to set up and customise your VCR. See the table below for the available menu choices. Initial settings are indicated in bold letters.

Menu choices	Set this option to
LANC MODE	<ul style="list-style-type: none"> ▶ M to control another VCR with this VCR using the LANC function. ▶ S to control this VCR with another VCR.
SHUTTLE MODE	<ul style="list-style-type: none"> ▶ AUTO to use the remote commander with a VCR that has a JOC/SHUTTLE function. ▶ A to use this remote commander with a VCR that doesn't have a JOC/SHUTTLE function.
TPC	<ul style="list-style-type: none"> ▶ ON to correct any slight shaking or vibration. ▶ OFF to leave any shaking or vibration uncorrected.
AUDIO LINE IN	<ul style="list-style-type: none"> ▶ BT to listen to and record stereo sound using the AUDIO LINE INPUT jacks. ▶ BE to listen to and record bilingual programmes using the AUDIO LINE INPUT jacks.
INDEX SEARCH	<ul style="list-style-type: none"> ▶ NRGM to search for index signals in numerical order. ▶ DATA to search for index signals by date.
DATA CODE	<ul style="list-style-type: none"> ▶ OFF to not have the day, month, year entered on the tape. ▶ ON to have the day, month, year entered on the tape. (Use if your video camera has this function.)
COLOUR SYSTEM (EV-5800M R only)	<ul style="list-style-type: none"> ▶ AUTO to tune in French broadcasts (normal settings). ▶ PAL to tune in the PAL system, such as German or Swiss broadcasts. If the signal is too weak or if the video camera has been set to PAL, the VCR-Det programmes may not be displayed properly.
Hi-8	<ul style="list-style-type: none"> ▶ AUTO when you want to record a Hi8 tape in the Hi8 format. ▶ OFF when you want to record a Hi8 tape in the standard 8 mm format.

RF MODULATOR	<ul style="list-style-type: none"> ▶ ON if you have connected the VCR to your TV using the RF modulator. ▶ OFF if you have connected the VCR to your TV using the EURO-AV, S, or AV cable.
LINE VIDEO	<ul style="list-style-type: none"> ▶ NRGM if you have connected the video output jack of the other VCR to the LINE IN 3 VIDEO. ▶ S if you have connected the S VIDEO output connector of the other VCR to the LINE IN 3 VIDEO connector of this VCR.
EURO AV OUT	<ul style="list-style-type: none"> ▶ NRGM when using a EURO-AV SCART cable. ▶ S when using a EURO-AV SCART cable connected to a TV with an S function.
NICAM (EV-5800M NVR only)	<ul style="list-style-type: none"> ▶ ON to listen to and record stereo/bilingual programmes in the NICAM system. ▶ OFF when you do not wish to use the NICAM system.

Shuttle editing

This section shows you how to edit VCR recordings in the most basic way: shuttle editing. The VCR also provides the following ways of editing:

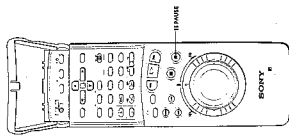
- Editing in or from another VCR or camcorder—"Editing with another VCR" (page 52).
- Editing via the LANC \square or CONTROL 5 jacks of two VCRs—"Synchronized editing" (page 54).
- Taking events from one tape and assembling them onto another tape in any order—"Assemble editing" (page 58).
- Editing with the JOC dial/SHUTTLE ring for camera editing—"Using the cell monitor function" (page 62).
- Adding music or narration on the PCM track—"Audio dubbing" (page 63).

During recording

If you want to cut out events such as TV commercials, you can pause recording and play back the tape in the reverse direction until the beginning of an unwanted event is reached. Then, record over it. This feature only works from the VCR. During linear recording, you can't use this function.

Note

- During shuttle editing, use the JOC dial/SHUTTLE ring on the VCR to enter the remote commander. Use the SHUTTLE EDIT function on the remote commander instead.



1 Press II PAUSE during recording.

The VCR enters recording pause mode.

2 Turn the JOC dial/SHUTTLE ring on the JOC counter-clockwise to rewind the tape until the unwanted event appears.

If you turn the JOC dial/SHUTTLE ring, you can select the playback speed by how fast you turn it, and if you turn it. When you release the dial or ring, the VCR enters recording pause mode.

3 Press II PAUSE when a desired event appears on the screen.

Recording starts.

During playback

You can re-record onto an unwanted portion of a pre-recorded tape. Use the JOC dial/SHUTTLE ring on the VCR.

1 When an unwanted event appears during playback, press II PAUSE.

The VCR enters the playback pause mode.

2 Turn the JOC dial/SHUTTLE ring on the VCR until the beginning of the unwanted event appears on the screen.

Turn the JOC dial/SHUTTLE ring to the desired playback speed. When you release the dial or ring, the VCR enters playback pause mode.

3 Press \bullet REC on the VCR or the remote commander.

The VCR enters recording pause mode.

4 Select a new programme for re-recording. Press PROG \square on the remote commander, or the PROG/PAUSE \square on the VCR. If you have made the connection using the line input jacks, press INPUT SELECT.

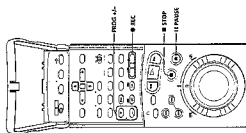
5 Press II PAUSE when the event you want to record appears on the screen.

Recording begins.

To stop recording Press \blacksquare STOP.

Note

- The picture may be distorted at the start and end point (recording end point).



Editing with another VCR

- Tips**
- Make sure you connect the correct video cable to the correct video jack of the camera or video recorder.
 - To connect the playback VCR to the VCR, connect the video cable to the VIDEO IN 2 jack on the front of the VCR. Press INPUT SELECT to display "L2" in the monitor.
 - If the playback VCR is a camcorder, you use the VIDEO IN 2 jack on the front of the VCR. Press INPUT SELECT to display "L2" in the monitor.
 - If the playback VCR is a camcorder, you use the VIDEO IN 2 jack on the front of the VCR. Press INPUT SELECT to display "L2" in the monitor.

Note

If the playback VCR has an S-video connector, use the supplied S-video cable to connect the playback VCR to the TV VCR connection. This connection gives you a better picture quality than using the video cable.

When using VIDEO IN 2, the video signal is sent to the VIDEO IN 2 jack on the front of the VCR. Press INPUT SELECT to display "L2" in the monitor.

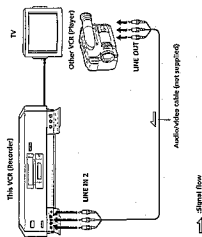
Menu

When using VIDEO IN 2, the video signal is sent to the VIDEO IN 2 jack on the front of the VCR. Press INPUT SELECT to display "L2" in the monitor.

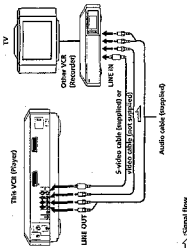
When using VIDEO IN 2, the video signal is sent to the VIDEO IN 2 jack on the front of the VCR. Press INPUT SELECT to display "L2" in the monitor.

This section shows you how to edit to or from another VCR or camcorder. You can make a copy of a tape using this VCR for recording or playback.

How to hook up to record on this VCR



How to hook up to record to another VCR



Operation (when recording on this VCR)

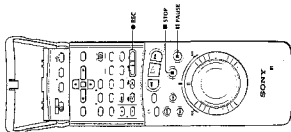
Before you start editing

- Press INPUT SELECT to select the recording tape speed (SP/LP).
- If the other (playback) VCR has an EDIT function, set it to ON.

- Insert a source tape into the playback VCR. Search for the point to start playback and set the VCR to playback pause.
- Insert a tape into this (recording) VCR. Search for the point to start recording and press II PAUSE.
- Press REC on this VCR and set it to recording pause.
- To start editing, press the II PAUSE buttons on both VCRs to release the VCRs from pause. For best results, press the pause button on the playback VCR just before pressing II PAUSE on this VCR.

To stop editing

Press the STOP buttons on both VCRs.



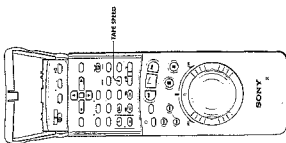
Note

When you start editing, edit only in the correct position. If the playback VCR is a VHS model, make sure that the tape is in the correct position before editing.

Tips

- To make your editing more precise, release the VCRs from pause before pressing II PAUSE buttons on the VCRs, not on the remote controls.
- To avoid unwanted events while editing, press II PAUSE on this VCR when the playback VCR is in pause. When II PAUSE is pressed, recording, unstable editing.

Synchronised editing (continued)



Operation (when recording on this VCR)

Before you start editing

- Make connections according to the illustration on page 54.
- If the playback VCR is equipped with an S-video output connector, use the supplied S-video cable for additional connection of the VCRs.
- If the playback VCR is a monaural type, connect the white plug to its audio output jack and the white plug on the other end to the LINE IN 2 AUDIO L (white) jack of this VCR.

On the playback VCR

- If available, activate the EDIT mode.
- If available, select LAUNCH MODE S or equivalent.

On this VCR

- Select LAUNCH MODE to M in the SET UP MENU. See "Looking at menu options" on page 48.
- Adjust the recording level. For details, see page 27.
- Check if the playback VCR has a JOG/SHUTTLE function; then set SHUTTLE MODE to either AUTO or A. See "Looking at menu options" on page 48.) Note that some VCRs do not have a JOG/SHUTTLE function.
- Select the tape speed, SP or LP, using the TAPE SPEED button.

- 1 Insert a source tape into the playback VCR. Insert a tape for recording into this VCR.
- 2 Press EDIT STANDBY on this VCR so that the EDIT STANDBY indicator lights up on the operation panel. This VCR enters recording pause and the playback VCR enters pause.
- 3 Press LAUNCH REMOTE on the VCR so that the LAUNCH REMOTE indicator lights up on the operation panel. Then turn the JOG dial/SHUTTLE ring to locate the start point on the playback VCR.
You can also use the tape transport buttons on this VCR.
- 4 Release the JOG dial/SHUTTLE ring when you have found the desired point.
The playback VCR enters playback pause. If you have used any of the tape transport buttons, set the playback VCR to playback pause.
- 5 Press LAUNCH REMOTE on the VCR so that the indicator goes off. Then turn the JOG dial/SHUTTLE ring to locate the insertion start point on this VCR's tape.
- 6 Press SYNCRO EDIT/START.
Synchronised editing starts.
- 7 When you have finished your editing session, press SYNCRO EDIT/START.
Both VCRs enter recording pause.
- 8 To edit more scenes, repeat steps 3 to 7.
- 9 When you have finished your editing session, press EDIT STANDBY.
Both VCRs stop.

Assembly editing

Time

- If the playback VCR you're using does not have the **TIME CODE WRITE** function but only a real-time function, precise editing cannot be guaranteed.
- For the **TIME CODE WRITE** function to work correctly, you must enter the time code on the entire portion of the tape you want to edit.
- When using the **TIME CODE WRITE** function, you can easily search for a desired event as each frame is given a readable code signal.

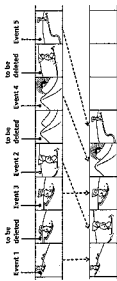
Notes

- THE TIME CODE WRITE** function on this VCE and on professional-level VCEs are not compatible. If you have a VCE while writing the time code, writing stops automatically. If you use a tape that has been re-used in both 50 and 60 frames per second, the TIME CODE WRITE function may not work properly.
- If you connect to a video camera, the camera's time code or picture, the time code on the screen may be difficult to read. Make your editing decisions before you connect to the camera. You may want to use the time code assigned to, or call the edit master function instead of the time code function (see page 42).
- When using the TIME CODE WRITE function, the time code will appear at the bottom of the screen. This is an indication of a malfunction. The black band between the time code and the video image will disappear when the video is playing.

With this function you can take events from one tape and assemble edit them onto another tape.

You can insert as many events onto the new tape that you require.

Using the assemble editing function, you can assemble edit up to eight different events at a time.



Using the TIME CODE WRITE function on a playback tape

When you connect this VCR to a VCR that features the TIME CODE WRITE function, you can use this function for assemble editing. This function allows you to perform more precise editing. It inserts frame position signals on the tape, and thus indexes (by numbers) the portions to be edited. However, if there are unrecorded segments on the portion that you want to rell, precise editing can't be guaranteed. In this case, you must enter the time codes onto the playback tape in the other VCR.

1. Rewind the playback tape to the beginning.

2. Press **F2** PLAY, then press **II** PAUSE.
 3. Press **TIME CODE WRITE** on the VCR.
 4. Press **II** PAUSE to start playback.
- Time code information is automatically written onto the tape.
5. Press **II** STOP at the end point of the position that you want to edit. Time code insertion stops.

Operation (when recording on this VCR)

Before you start editing

- Connect this VCR to the playback VCR using the same connections as illustrated in the section "Synchronised editing" on page 54. Use the sure to read the operating instructions for the playback VCR before making connections.)

1 Press ASSEMBLE on this VCR.

The assemble editing menu appears on the TV.



Don't let AMC elements on this year

Press DATE REMOTE on this VCR, "REMOTE" appears on the TV screen, and the REMOTE indicator lights up on the operation panel. You can now control the other VCR's tape transport buttons from this VCR.



3 Find the first frame of the event you want to assemble

edit. Using this VCR to operate the playback VCR to find the event you want to edit, then proceed to step 4.



A. Beers ready on the VCB to conduct

press buttons on the VCA to mark the "IN" frame for the event you are assemble editing.

(continued)

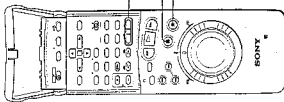
Assemble editing (continued)

Tip

- The TOTAL TIME figure gives the total time for all the events selected for the assemble editing. The assemble editing will only be possible if the events will not be recorded properly.

Notes

- A space of about two seconds between the IN frame and CUT frame, or the events cannot be marked.
- When you want to stop assemble editing, press **STOP**.
- When the TIME CODE is less than 00:00:00, the editing will not be very accurate. Do the editing manually as described in the "Manual editing" section on page 54.



5 Find the last scene of the event you want to assemble edit.

Once the end of the first event has been found, go to step 6.

6 Press MARK on the VCR to mark the "IN" frame.

The "IN" flashes and the total time of the event you have selected is displayed. After a couple of seconds, the VCR is ready for setting the next event.

7 Repeat steps 2 to 6 to select another event for editing.

Up to 8 events can be selected for assemble editing.

8 When you have finished selecting your events, press STOP.

9 Press LANC REMOTE when you are finished designating the required events.

The REMOTE indication no longer appears. The playback VCR can no longer be controlled by this VCR.

10 Find the recording start point using this VCR.

When the start point has been found, press **PAUSE** and then **REC**.

11 Press SYNCHRO INSTANT.

"EAT" appears on the TV screen, and the assemble editing is completed. The VCR enters the recording pause mode.

12 When you have finished your editing session, press ASSEMBLE.

To assemble edit more than 8 events

Repeat the above described procedure to assemble edit the additionally recorded events.

- After you've finished one assemble editing session, press **ASSEMBLE**. The assemble editing mode is cancelled. The contents stored in memory are deleted.
- When the VCR enters recording pause mode, press **STOP**.
- Repeat from step 1 on page 53.

To change the settings stored in memory

Press **BACK** to return to the VCR menu. Only the last event you have entered for assemble editing can be changed. If you press **BACK** twice in a row, the event entered last is deleted.

To check the settings stored in memory

Press **STOP**. To cycle through the designated events, press **BACK**.

To stop assemble editing temporarily

Press **SYNCHRO EDIT/START**. When you wish to resume assemble editing, editing starts from the first event.

Tip

For the purpose of protecting the tape when you are in recording pause mode, after a couple of seconds, the VCR automatically enters the sleep mode.

Notes

- When you press **BACK**, the VCR returns to the last frame of the event you have selected. Press **BACK** again to return to the first frame of the event.
- If the event is designated as an event, the tape records through to the end.
- If you press **PAUSE** during the event, the event you are editing is not. If you have another event, the event you are editing is automatically called.
- During fast forwarding or fast reversing, the CODE indicator on the playback VCR should show "EAT". The assemble editing is not possible in this case. Please use the synchronous editing function instead.

EVENT	1	2	3	4	5	6	7	8
START	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11
END	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11
TIME	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11

EVENT	1	2	3	4	5	6	7	8
START	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11
END	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11
TIME	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11	00:01:11

Using the edit monitor function

Tip

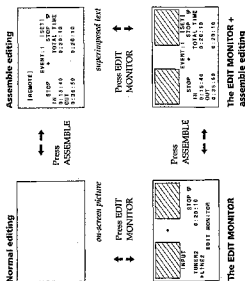
- If you connect two video picture displays, the picture displayed on the screen will be the same as the edit monitor function lets you use the information easily.

Note

- Depending on the playback speed, the edit monitor may not be displayed.

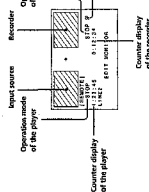
To monitor editing

When the normal editing mode is displayed on the TV screen, you can switch between editing modes according to the illustration below:

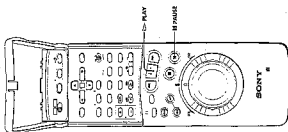


The EDIT MONITOR

For more details on the individual editing modes mentioned here, refer to the respective sections.

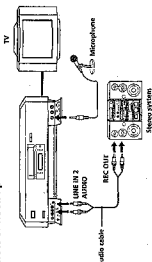


Audio dubbing



You can add music or narration on a pre-recorded tape while watching the VCR playback picture. Audio-labeled sound is recorded on the PCM track. (See page 28.)

How to hook up



Operation

Before you start editing

- Press INPUT SELECT to display "12" in the display window.
- Set the AUDIO MONITOR selector to PCM.

1 Set the PCM REC LEVEL control to the desired setting.

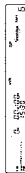
This allows you to balance the sound level of the sound to be dubbed against that of the standard track.

2 Press > PLAY.

3 Find the start point of the tape segment that you want to dub new sound onto, and press II PAUSE.

4 Press AUDIO DUB.

The AUDIO DUB indicator lights up in the display window.



(continued)

Notes

- You must be in playback mode to use the AUDIO DUB. If you are in recording mode, you must first press II PAUSE to stop recording.
- Audio dubbing cannot be done if the stop takes on the same position as the start position.

Audio dubbing (continued)

- 5 Press **II** PAUSE when you start the playback source, or want to start adding narration using a microphone.

- 6 When you have finished your audio dubbing session, press **II** STOP on this VCR.

Tip

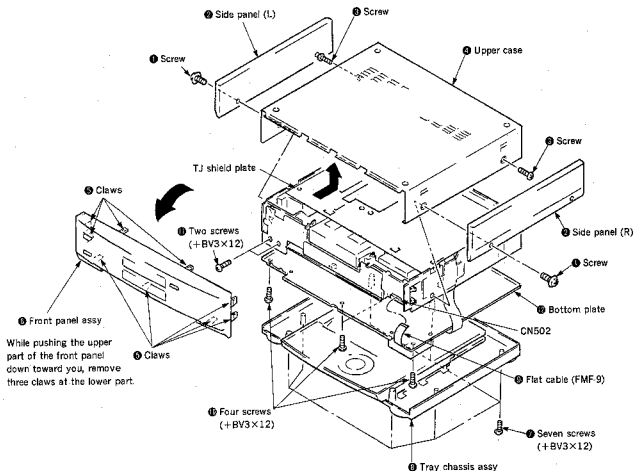
- For a low sound is recorded on a video tape" on page 26.
- For better sound, adjust the microphone level from the zero point to the normal position.
- If the microphone is turned off from the normal position to the zero point.
- The sound from the LINE IN and the MIC jack cannot be recorded on the first pass can be mixed.

Notes

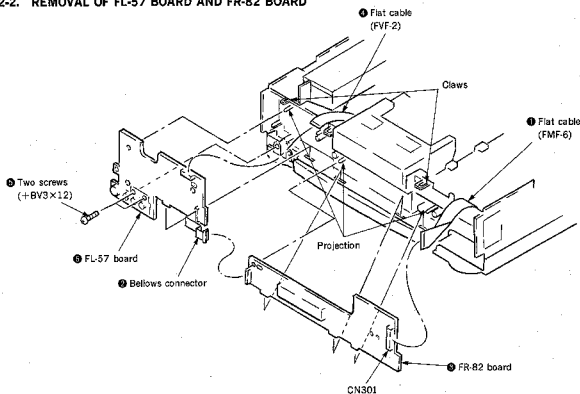
- The added sound cannot be played back without PCM recording or without PCM recording or playback functions.
- The microphone cannot record sound on the PCM track.
- During audio dubbing, still scenes may occur on the heavy parts of the screen. This does not affect the recorded.
- The picture may flicker or pictures may fade or retain.
- Sound from a microphone is recorded in mono.
- If the microphone is not connected to the MIC jack, or the sound will be mixed with the sound from the LINE IN ALIEN 2 or 3.
- If you dub new sound for a video tape, the original VCR information is erased.

SECTION 2 DISASSEMBLY

2-1. REMOVAL OF CABINET ASSEMBLY

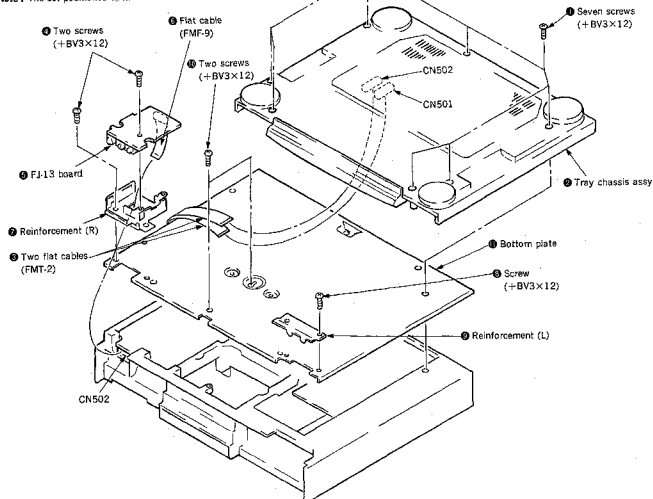


2-2. REMOVAL OF FL-57 BOARD AND FR-82 BOARD

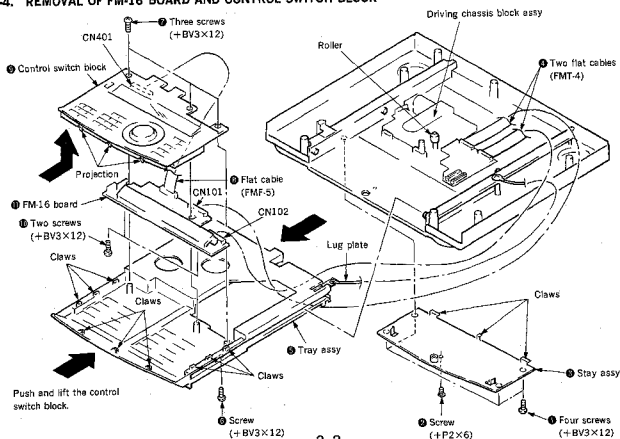


2-3. REMOVAL OF FJ-13 BOARD AND BOTTOM PLATE

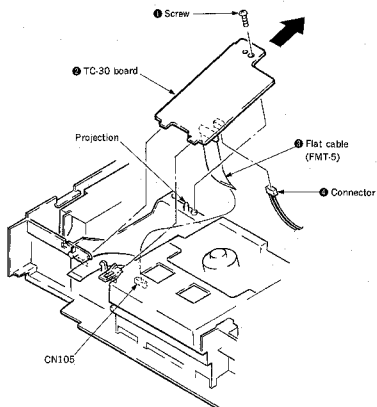
Note: The set positioned upside-down.



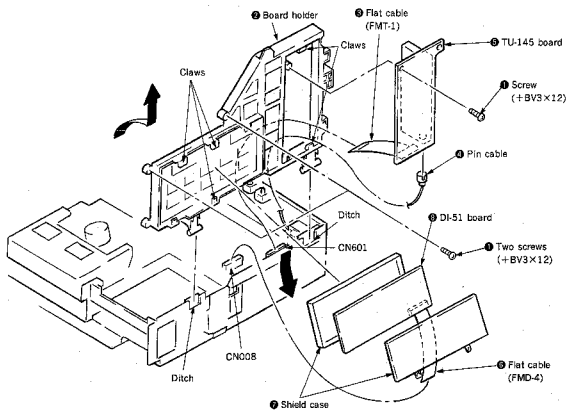
2-4. REMOVAL OF FM-16 BOARD AND CONTROL SWITCH BLOCK



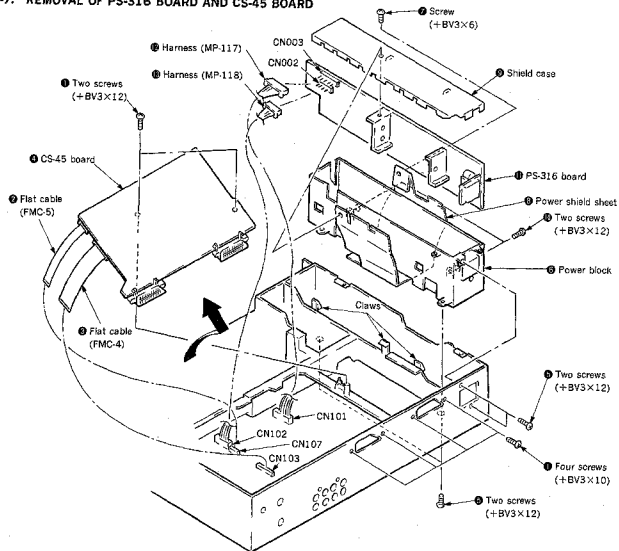
2-5. REMOVAL OF TC-30 BOARD (VC, NP, B MODEL)



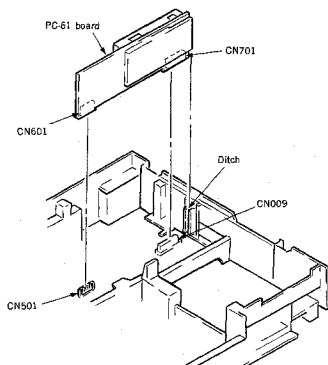
2-6. REMOVAL OF TU-145 BOARD AND DI-51 BOARD



2-7. REMOVAL OF PS-316 BOARD AND CS-45 BOARD

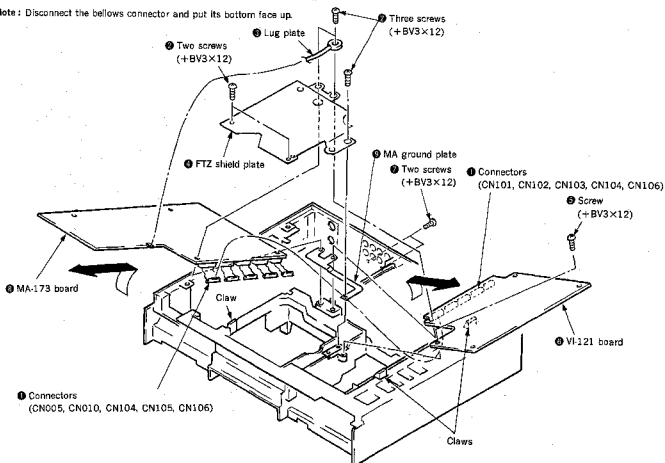


2-8. REMOVAL OF PC-61 BOARD

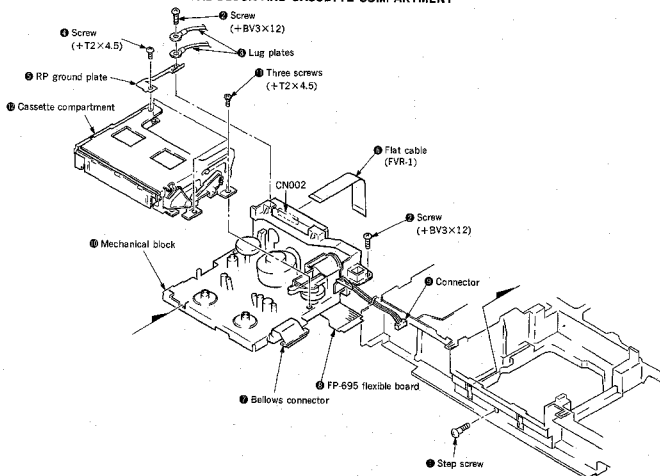


2-9. REMOVAL OF VI-121 BOARD AND MA-173 BOARD

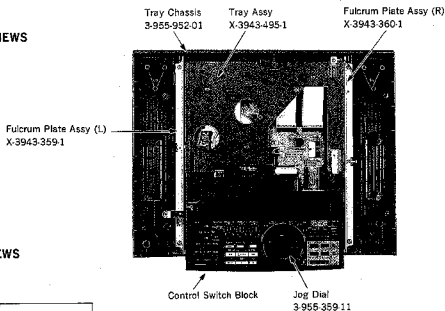
Note: Disconnect the bellows connector and put its bottom face up.



2-10. REMOVAL OF MECHANICAL BLOCK AND CASSETTE COMPARTMENT



2-11. TRAY CHASSIS INTERNAL VIEWS



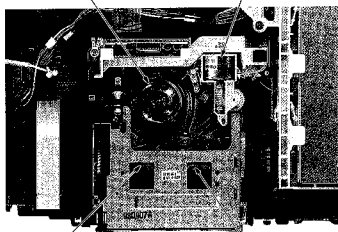
2-12. MECHANICAL INTERNAL VIEWS

—Upper side—

M901

Drum ASSY (DGR-0B0A-R)	A-7048-696-A
Drum upper (DGR-0B0-R)	A-7049-629-A

M903
Cam Motor Assy
X-3942-946-1



—Lower side—

M902
Capstan Motor
8-835-499-01

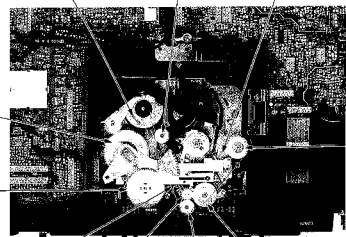
Belt Pulley Assy
X-3943-016-1

Timing Belt (FL)
3-954-079-01

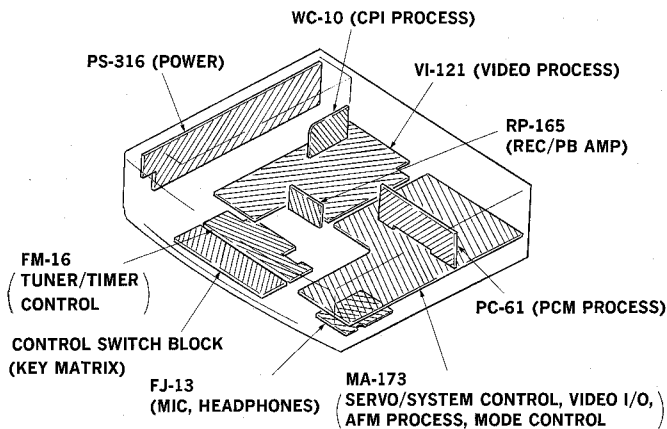
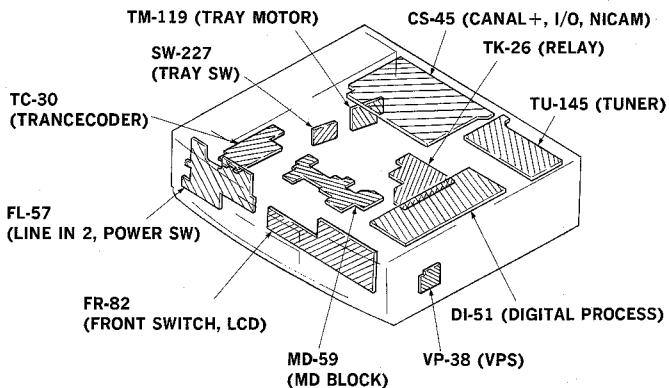
Main Cam
3-954-050-01

Rotary Switch
1-692-498-11

FL Pulley Gear
3-953-983-01



2-13. CIRCUIT BOARDS LOCATION



SECTION 3 BLOCK DIAGRAMS

3-1. OVERALL BLOCK DIAGRAM

- The boards which signals only pass through may be omitted.

• Common note of block diagrams

Abbreviations

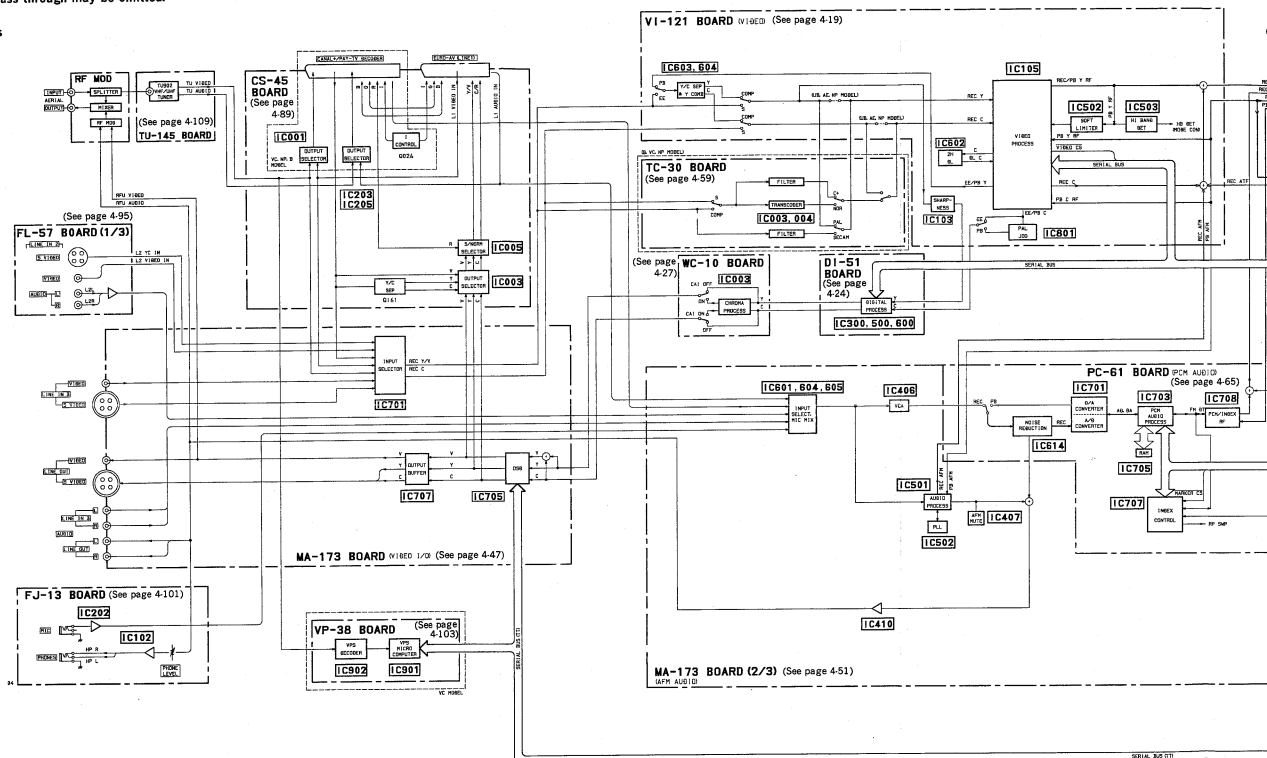
UB : UK

AE : Italian

VC : German

NP : North European

B : French

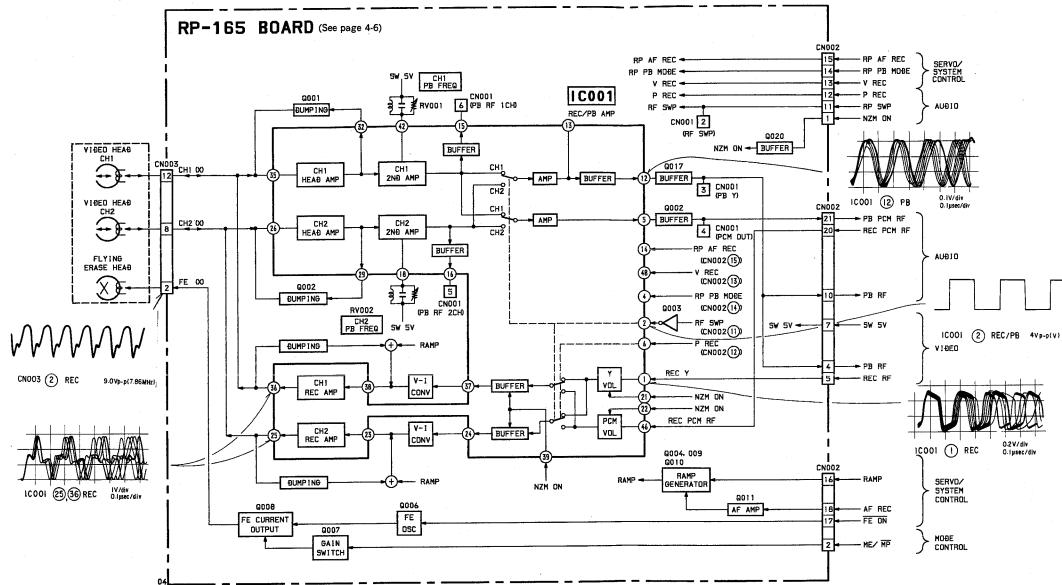




EV-S9000E AE/B/NP/UB/VC

3-2. HEAD AMP BLOCK DIAGRAM

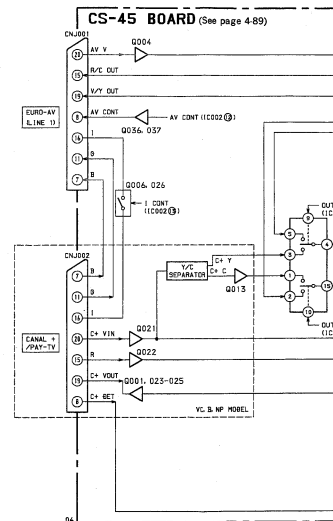
- The boards which signals only pass through may be omitted.



3-3. VIDEO I/O BLOCK DIAGRAM

- The boards which signals only pass through may be omitted.

• Abbreviations
 UB:UK
 AE:Italian
 VC:German
 B:French
 NP:North Eur



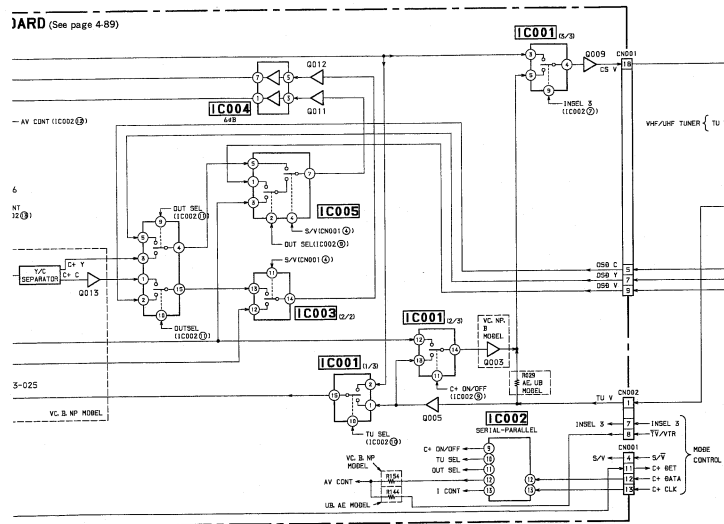
DIAGRAM

is only pass through may be omitted.

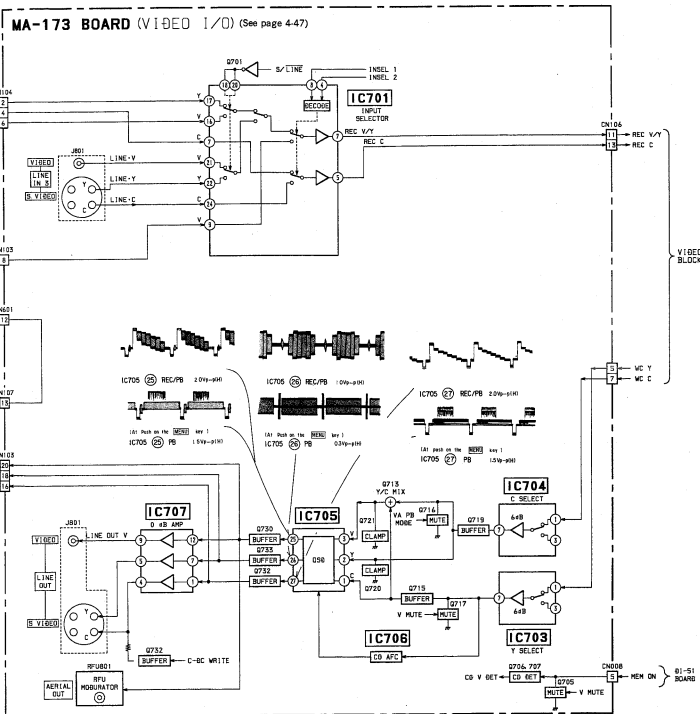
Abbreviations

UB: UK
AE: Italian
VC: German
B: French
NP: North European

BOARD (See page 4-89)

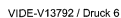


MA-173 BOARD (VIDEO I/O) (See page 4-47)



- The boards which signals only pass through may be omitted.

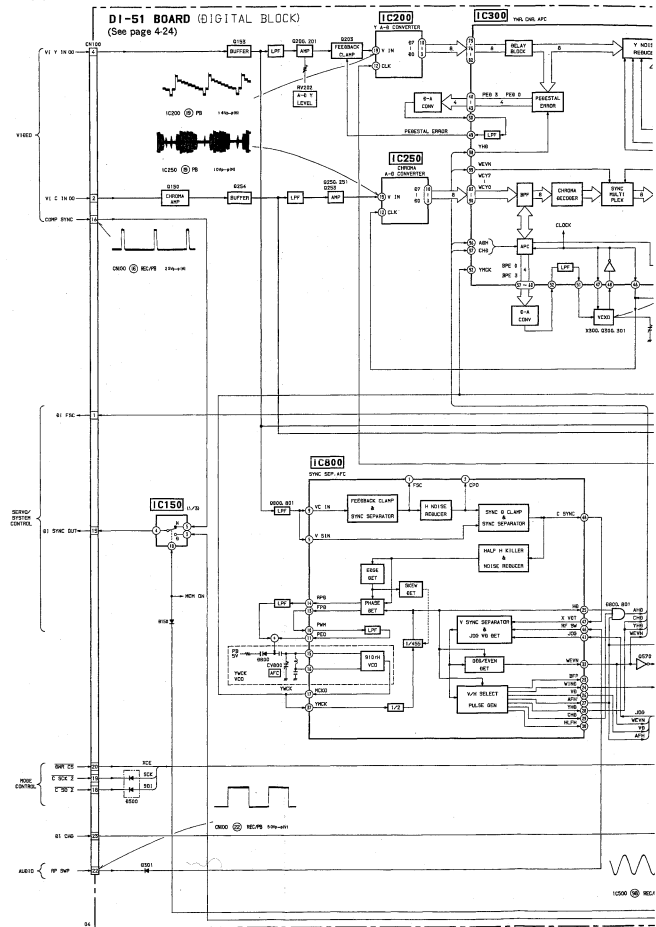




EV-S9000E AE/B/NP/UB/VC

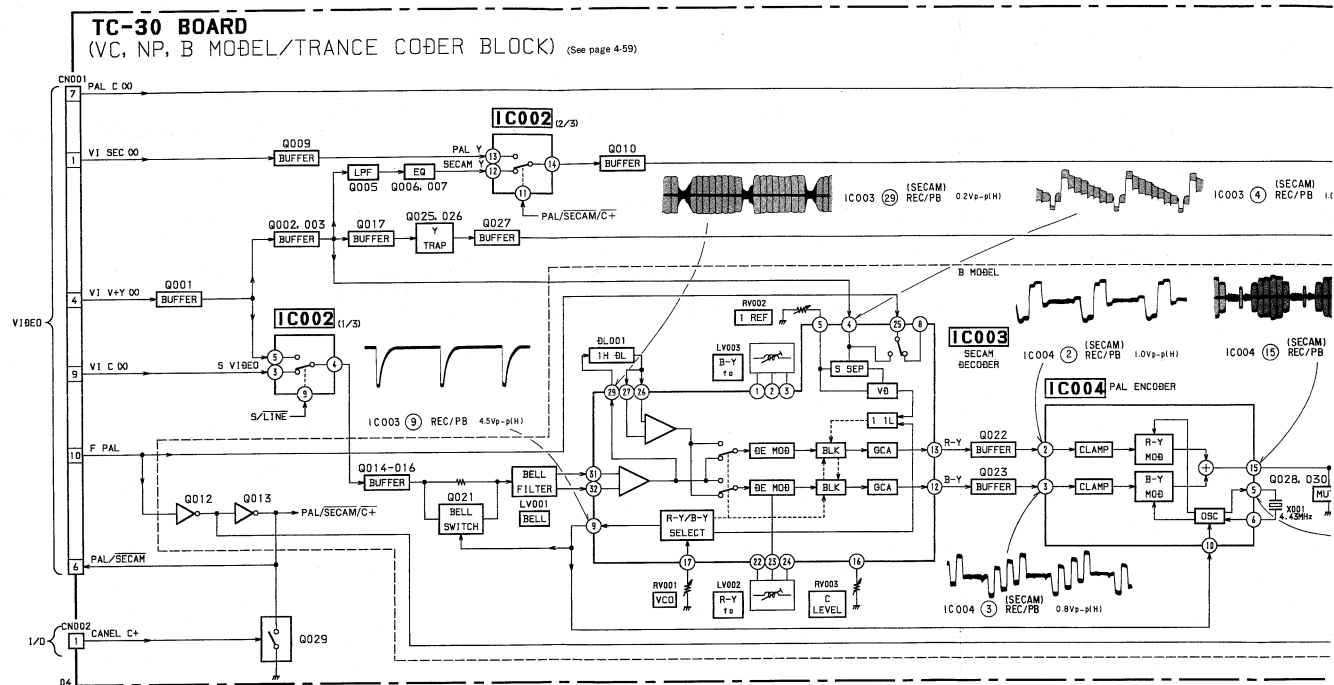
3-5. DIGITAL BLOCK DIAGRAM

• The boards which signals only pass through may be omitted.



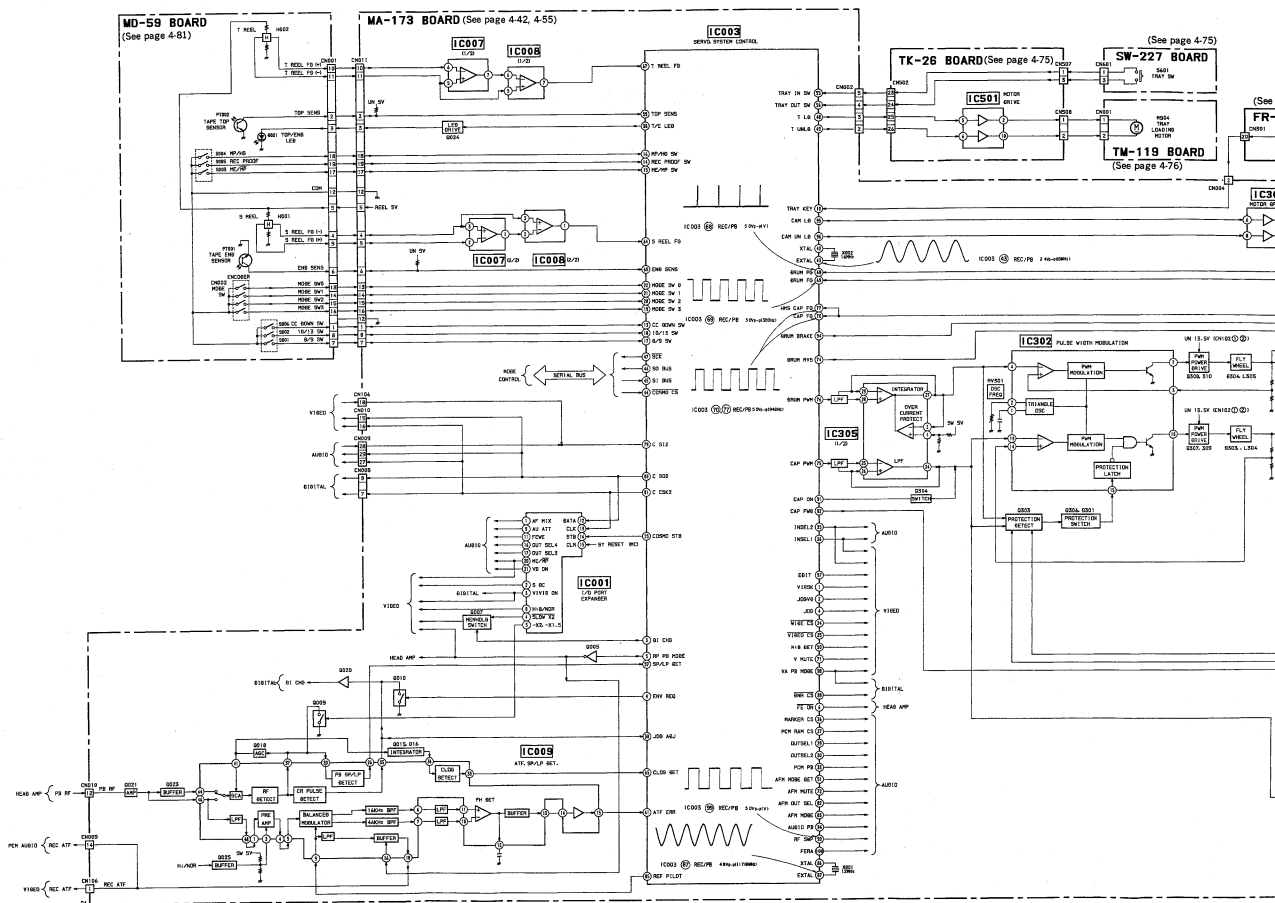
3-6. TRANCECODER BLOCK DIAGRAM

- The boards which signals only pass through may be omitted.

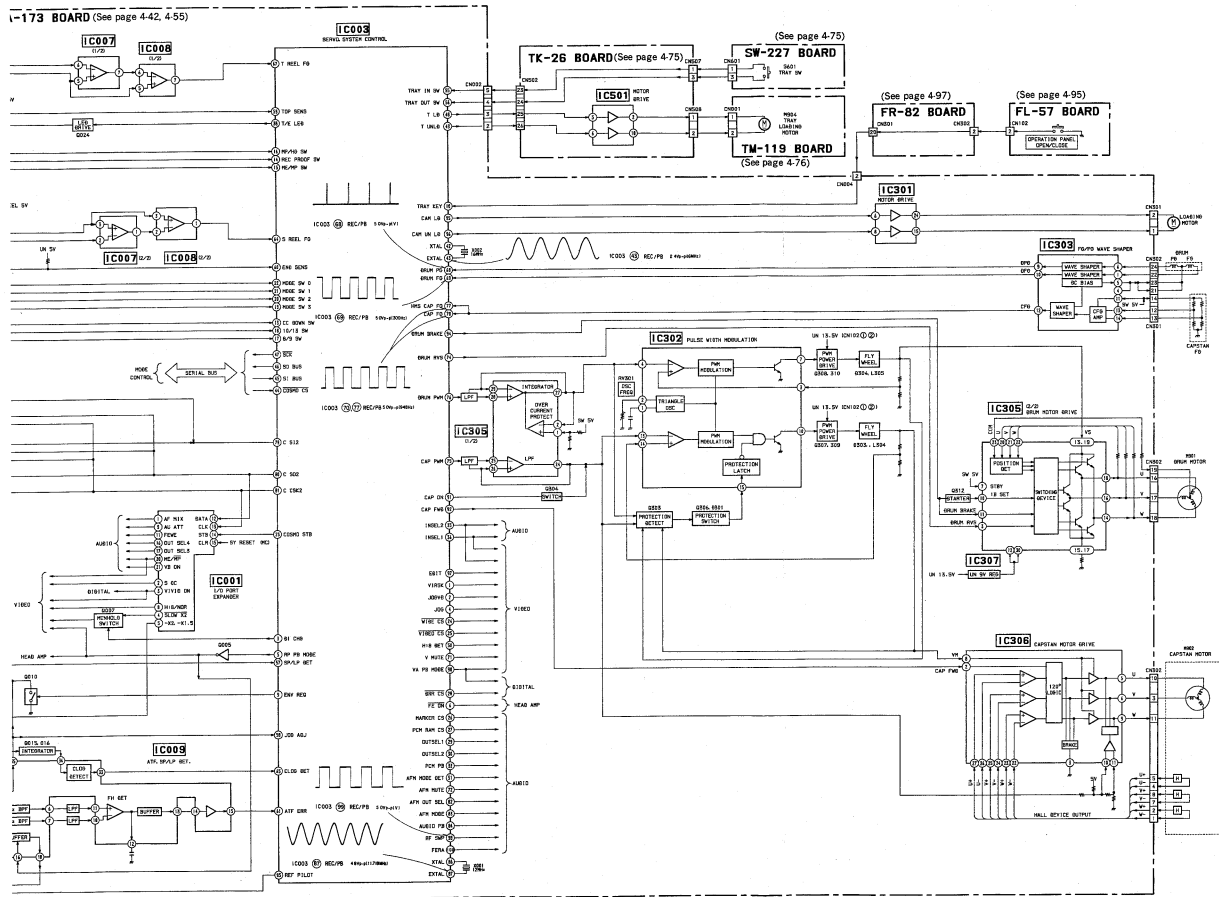




3-7. SERVO, SYSTEM CONTROL BLOCK DIAGRAM
 • The boards which signals only pass through may be omitted.

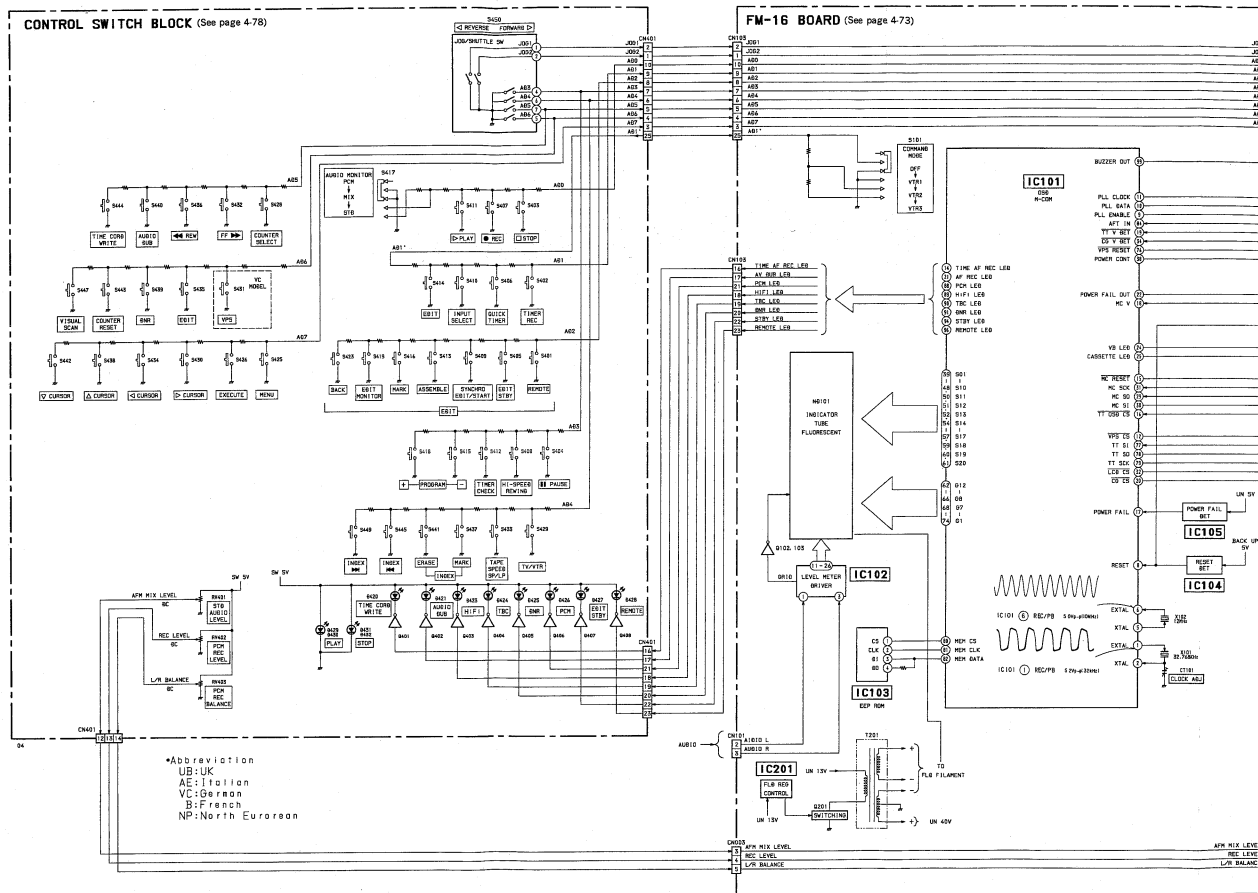


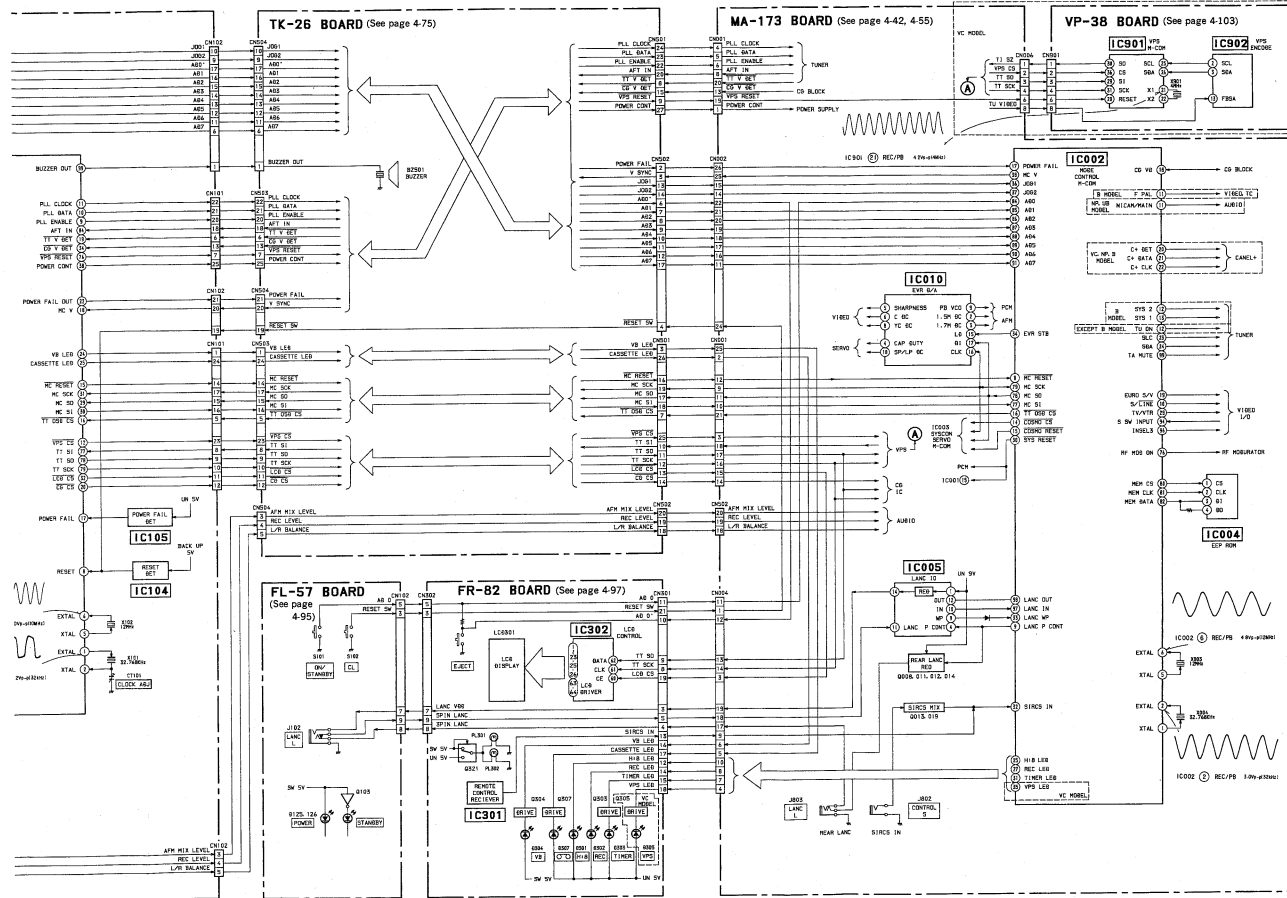
V-173 BOARD (See page 4-42, 4-55)



3-8. TIMER, TUNER, MODE CONTROL BLOCK DIAGRAM

- The boards which signals only pass through may be omitted.

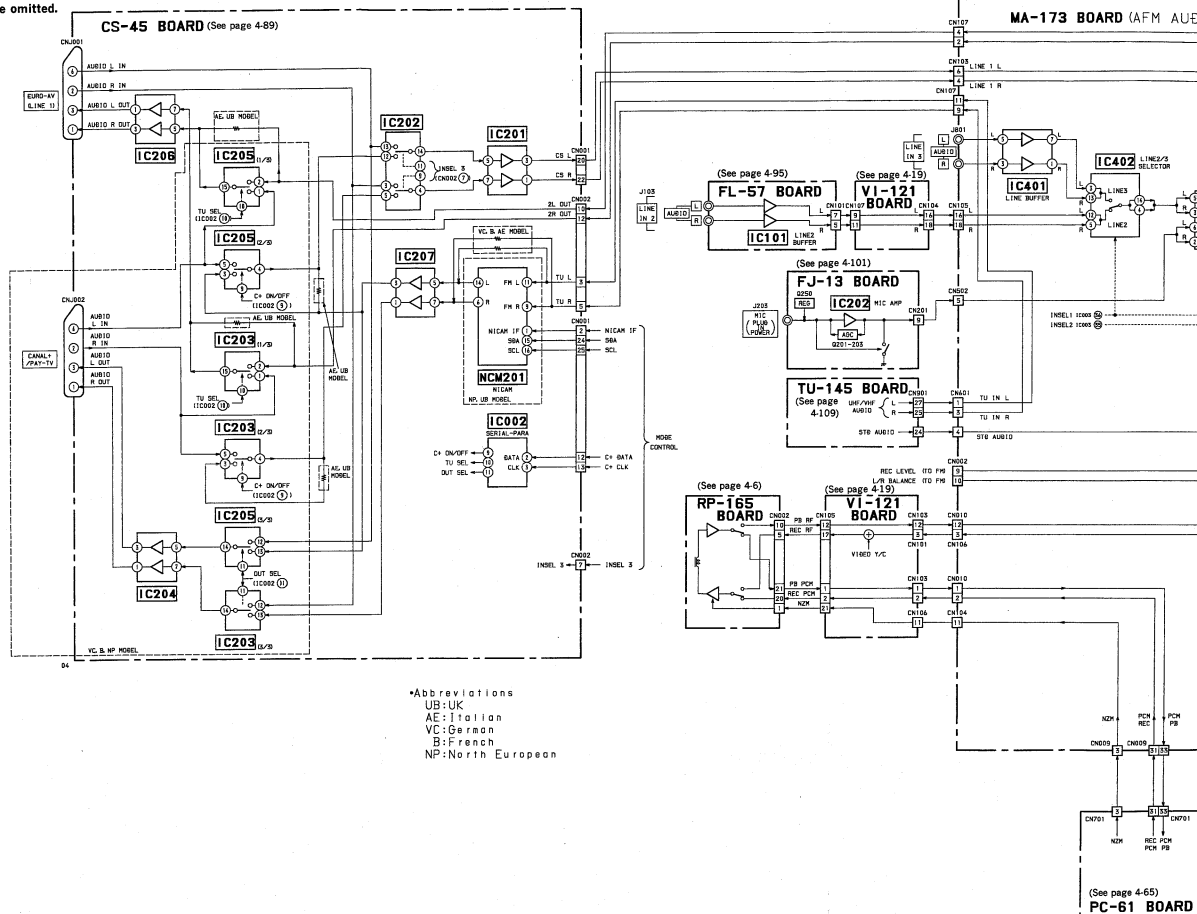




EV-S9000E AE/B/NP/UB/VC

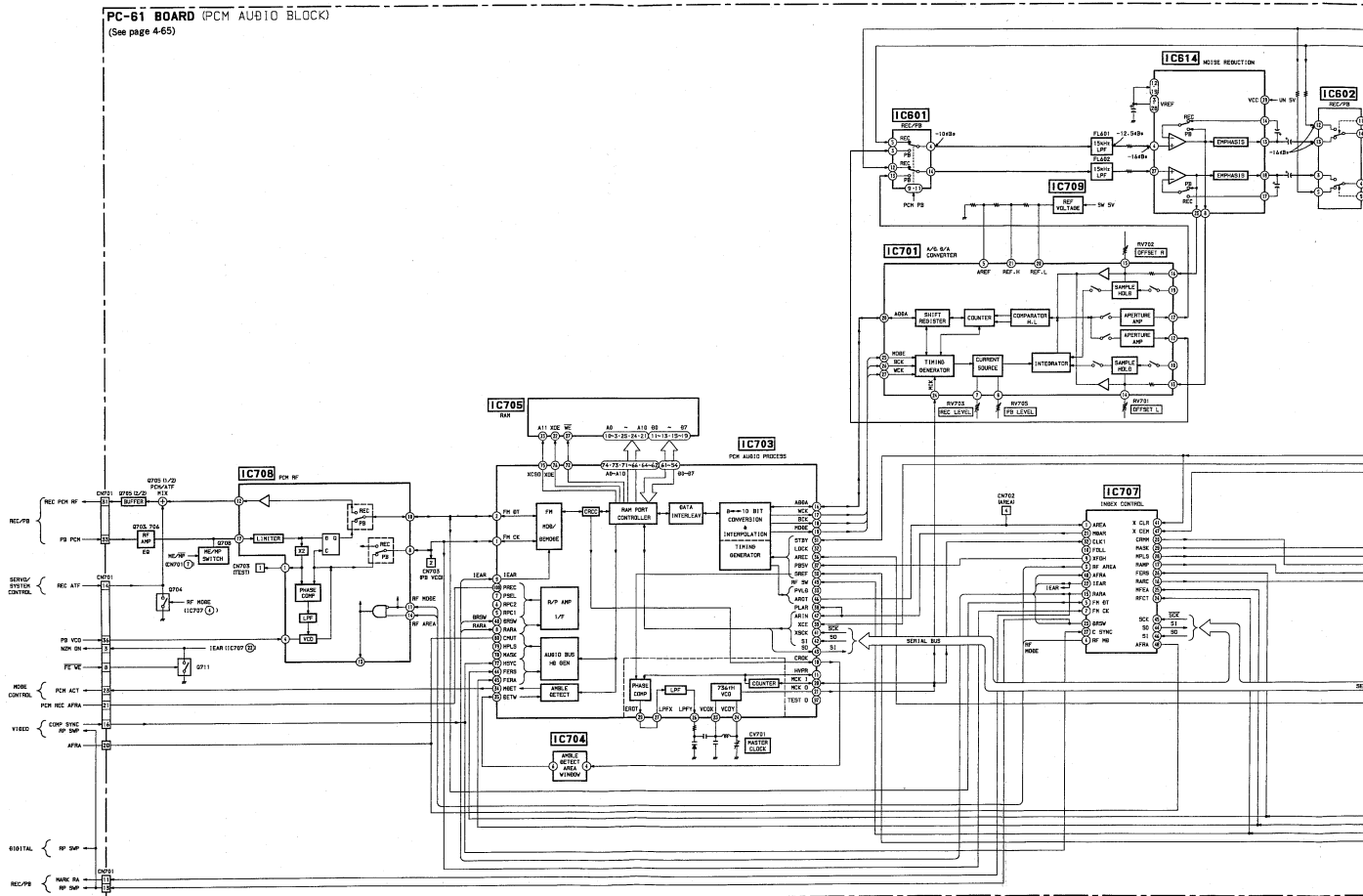
3-9. AFM AUDIO BLOCK DIAGRAM

- The boards which signals only pass through may be omitted.



3-10. PCM AUDIO BLOCK DIAGRAM

- The boards which signals only pass through may be omitted.



- The boards which signals only pass through may be omitted.

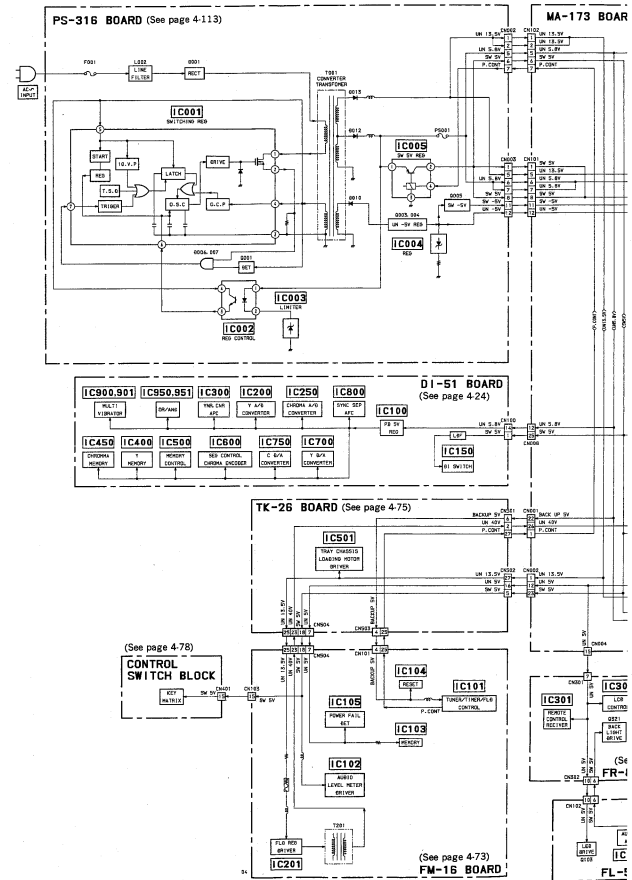
- TO
MA-173
BOARD
CN601



EV-S9000E AE/B/NP/UB/VC

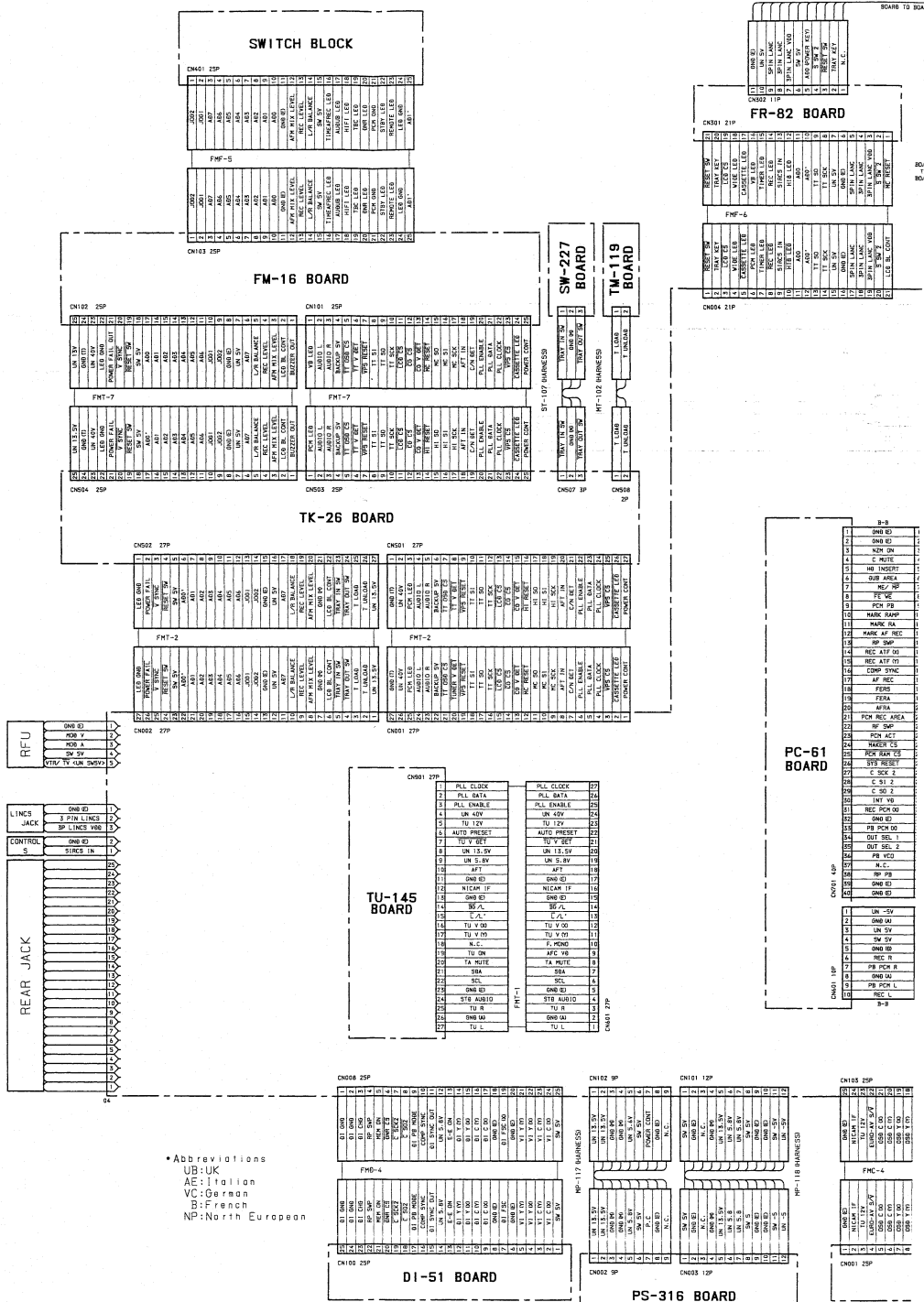
3-12. POWER BLOCK DIAGRAM

- The boards which signals only pass through may be omitted.

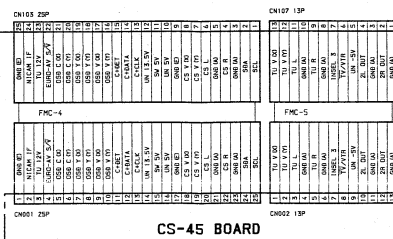
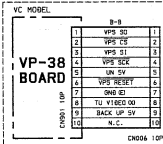
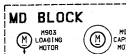
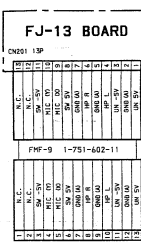
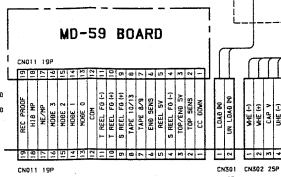
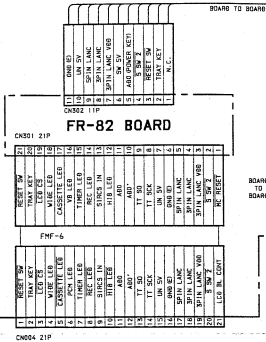
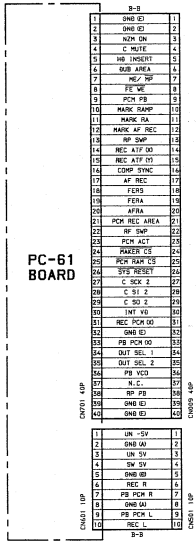
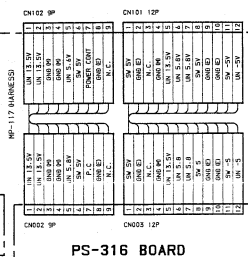
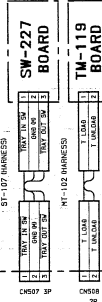
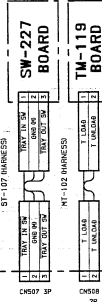
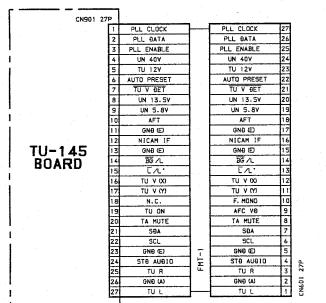
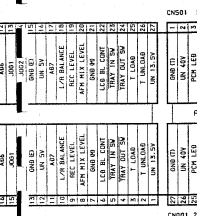
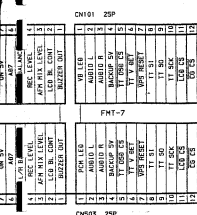
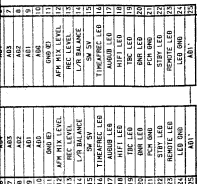


SECTION 4 PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM







4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.

(In addition to this, the necessary note is printed in each block.)

● For printed wiring boards.

- Pattern from the side which enables seeing.
- Circled numbers refer to waveforms.

● For schematic diagram.

- Caution when replacing chip parts.
New parts must be attached after removal of chip.
Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/4W unless otherwise noted.
- Chip resistor are 1/8W or 1/10W unless otherwise noted.
- k Ω : 1000 Ω , M Ω : 1000k Ω .
- All capacitors are in μ F unless otherwise noted. pF: μ F, 50V or less are not indicated except for electrolytics and tantalums.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

- nonflammable resistor.

- fusible resistor.

- panel designation.

- internal component.

- adjustment for repair.

- B + Line.

- B - Line.

- INPUT/OUTPUT direction of (+, -) B line.

- Circled numbers refer to waveforms.

- Voltages are dc between ground and measurement points.

- Readings are taken with a color-bar signal input.

- Readings are taken with a digital multimeter (DC10M Ω).

- Voltage variations may be noted due to normal production tolerances.

● Abbreviations

UB: UK

AE: Italian

VC: German

NP: North European

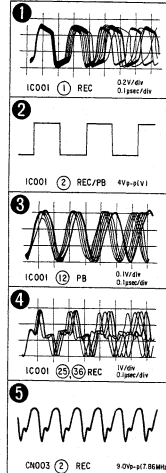
B: French

Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

RP-165 BOARD

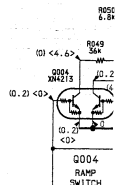


● Signal path

	CHROMA	VIDEO Signal	V/CHROMA	AUDIO Signal
REC	→	→	→	→
PB	→	→	→	→

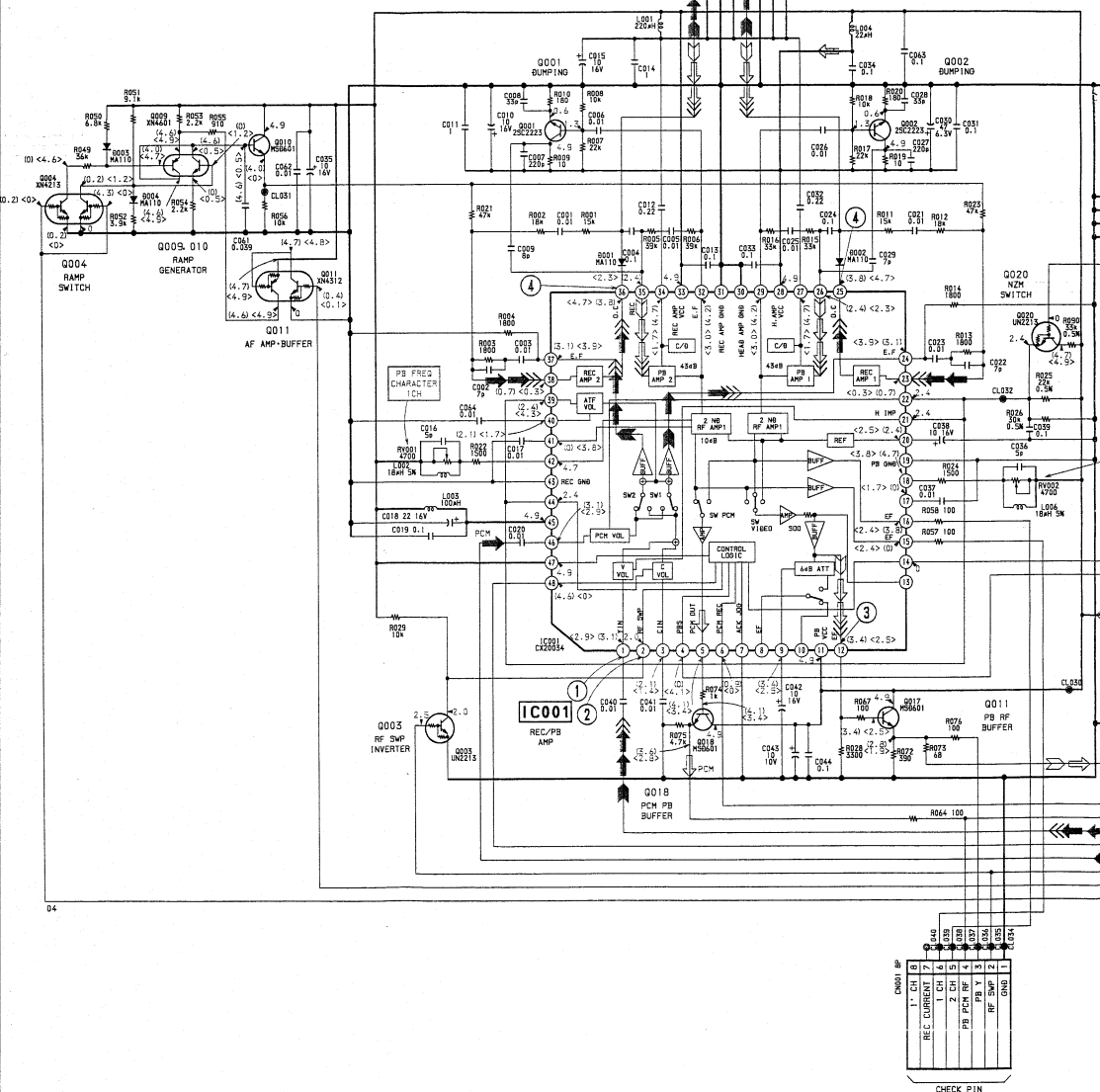
● Signal path

	REC	REC/PB	PB
Ref. signal	→	→	→

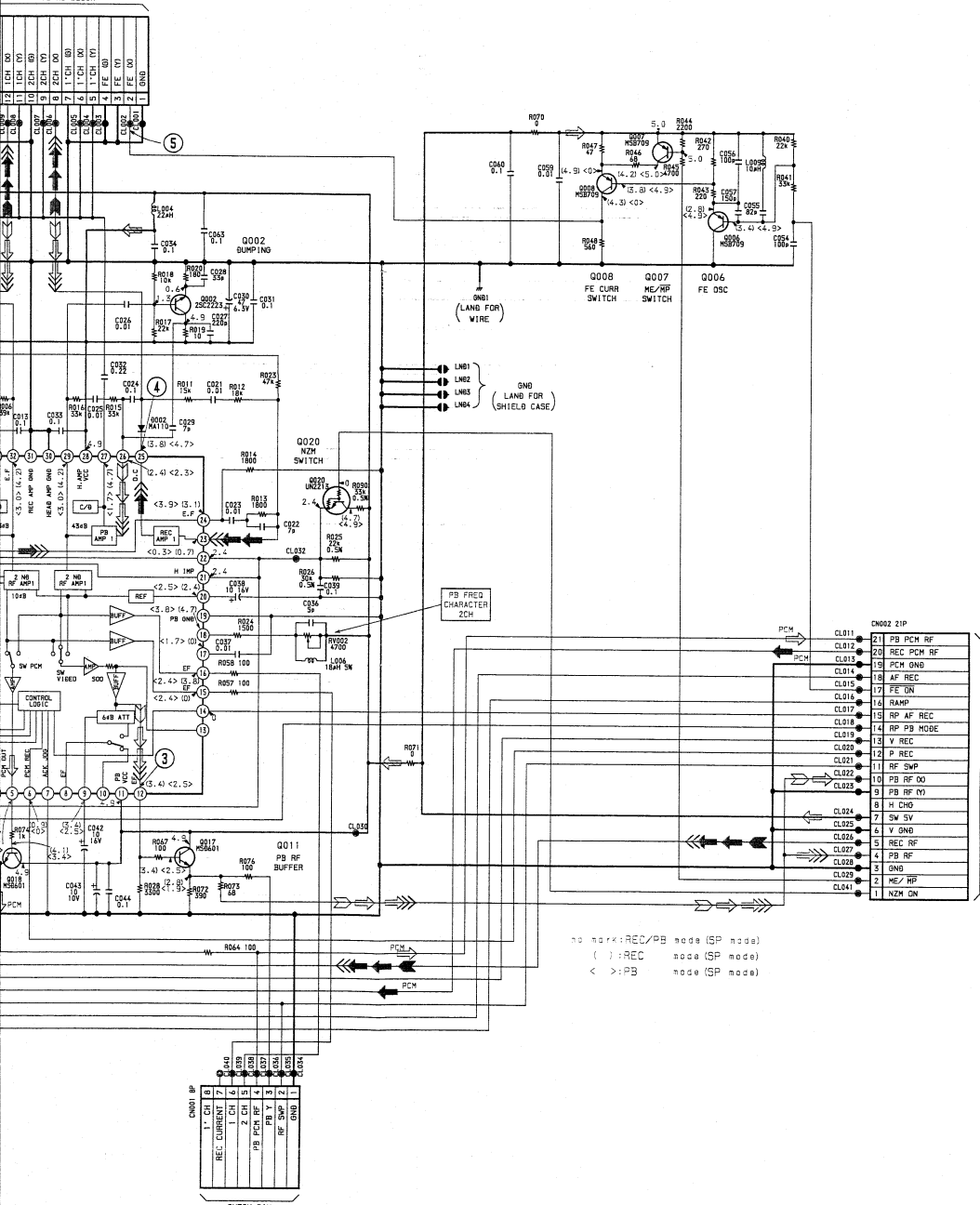


RP-165 BOARD

(See page 4-81)
TO M0 BLOCK



(See page 4-81)
TO MD BLOCK



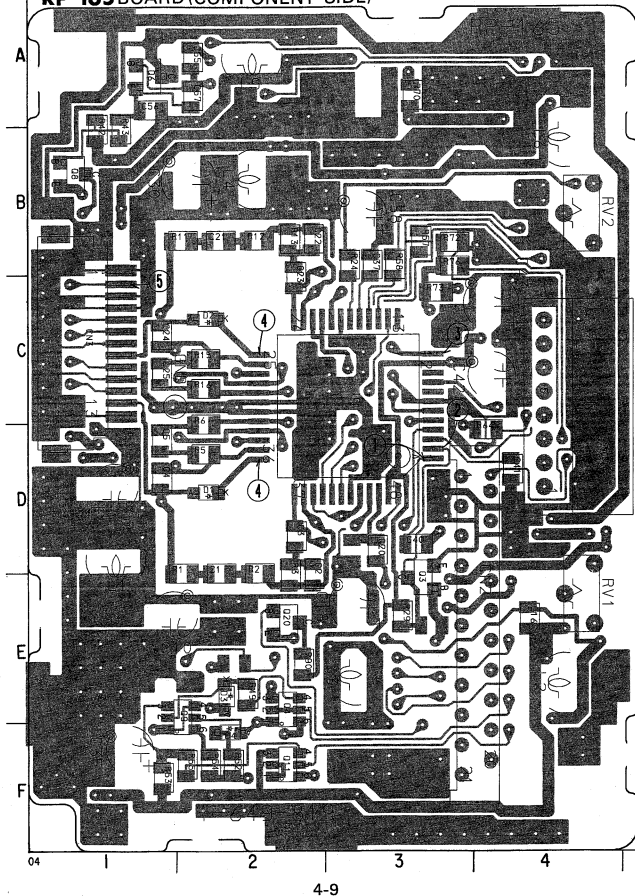
no mark: REC/PB mode (SP mode)
(): REC mode (SP mode)
< >: PB mode (SP mode)

TO
V1-121
BOARD
CN105
(See page
4-19)

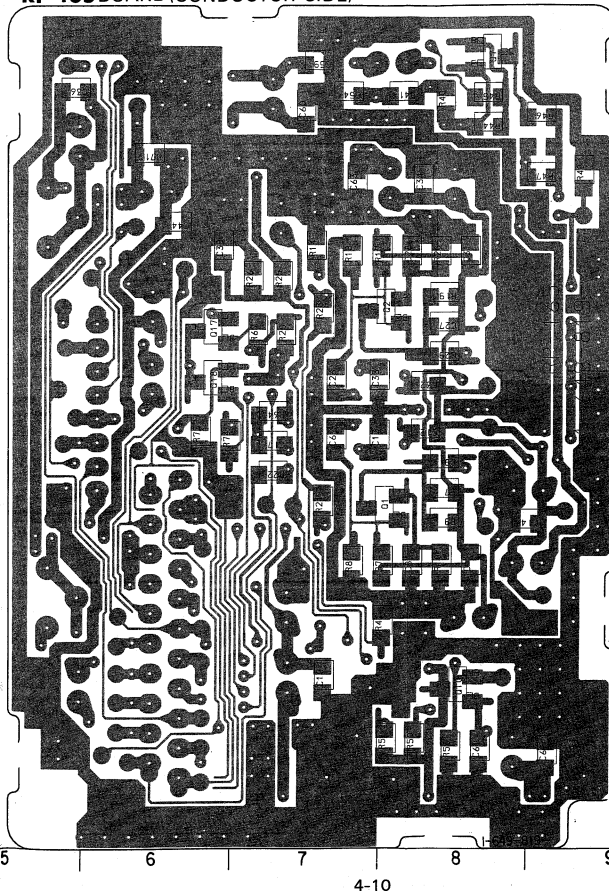
RP-165 (REC/PB AMP) PRINTED WIRING BOARD

—Ref. No. RP-165 BOARD: 1000 series—

RP-165 BOARD (COMPONENT SIDE)



RP-165 BOARD (CONDUCTOR SIDE)



RP-165 BOARD
CN001 C-4
CN002 E-4
CN003 C-1

D001 D-2
D002 C-2
D003 E-2
D004 F-2

IC001 C-3

Q001 D-8
Q002 G-8
Q003 E-3
Q004 E-2
Q006 A-1
Q007 A-8
Q008 B-1
Q009 E-2
Q010 E-8
Q011 F-2
Q017 C-6
Q018 C-6
Q020 E-2

PS-316 (POWER)

FM-16
(TUNER/TIMER
CONTROL)

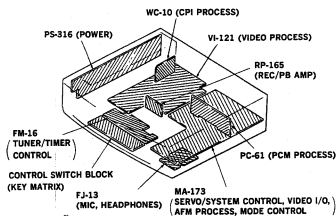
CONTROL SWITCH BLOCK
(KEY MATRIX) FJ-13
(MIC, HEA)

II

4-9

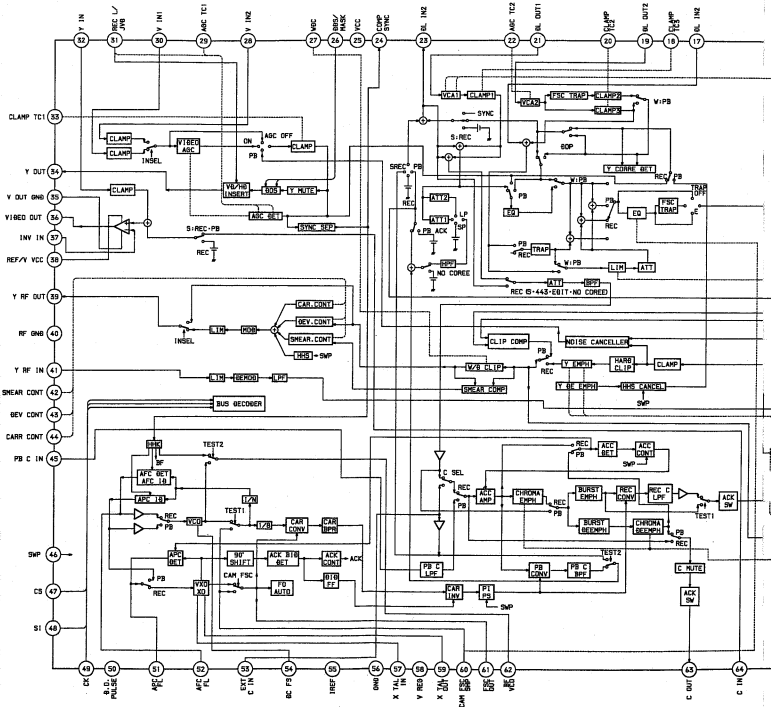
4-10

RP-165 BOARD	
CN001	C-4
CN002	E-4
CN003	C-1
D001	D-2
D002	C-2
D003	E-2
D004	F-2
IC001	C-3
Q001	D-8
Q002	C-8
Q003	E-3
Q004	E-2
Q006	A-1
Q007	A-8
Q008	B-1
Q009	E-2
Q010	E-8
Q011	F-2
Q017	C-6
Q018	C-6
Q020	E-2

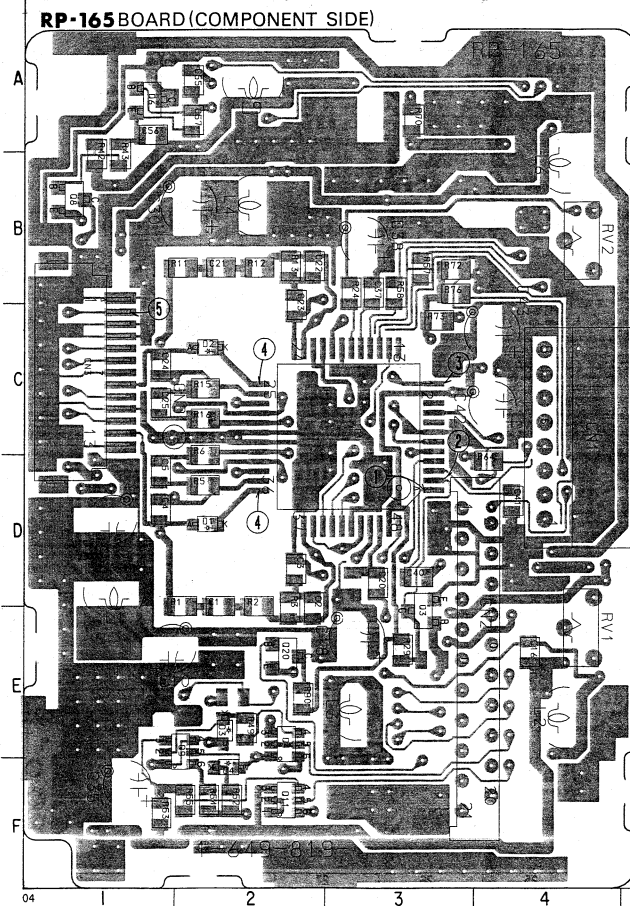


• VI-121 BOARD IC BLOCK DIAGRAMS

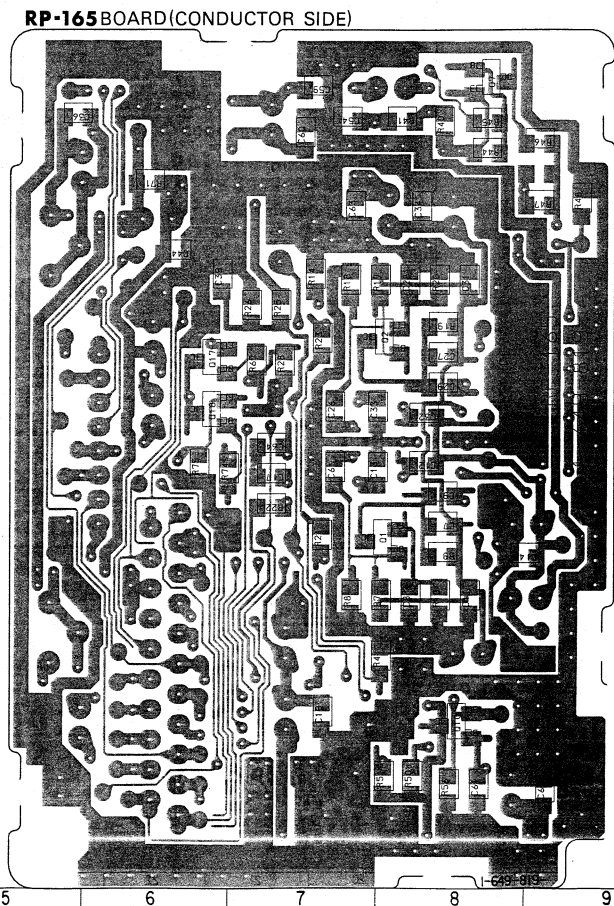
IC105 CXA1810
VIDEO PROCESS



RP-165 (REC/PB AMP) PRINTED WIRING BOARD
 —Ref. No. RP-165 BOARD: 1000 series—

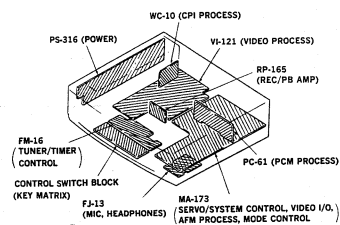


4-9

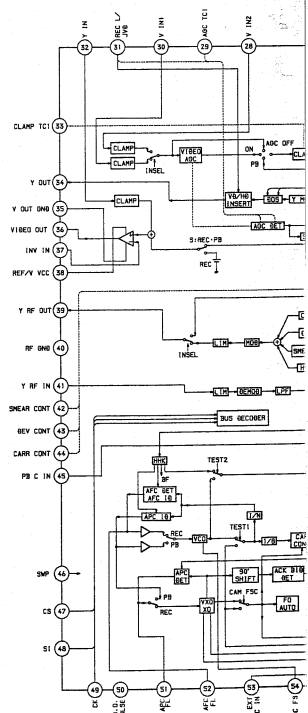


4-10

- | | |
|------|-----|
| Q001 | D-8 |
| Q002 | C-8 |
| Q003 | E-3 |
| Q004 | E-2 |
| Q006 | A-1 |
| Q007 | A-8 |
| Q008 | B-1 |
| Q009 | E-2 |
| Q010 | E-8 |
| Q011 | F-2 |
| Q017 | C-6 |
| Q018 | C-6 |
| Q020 | E-2 |

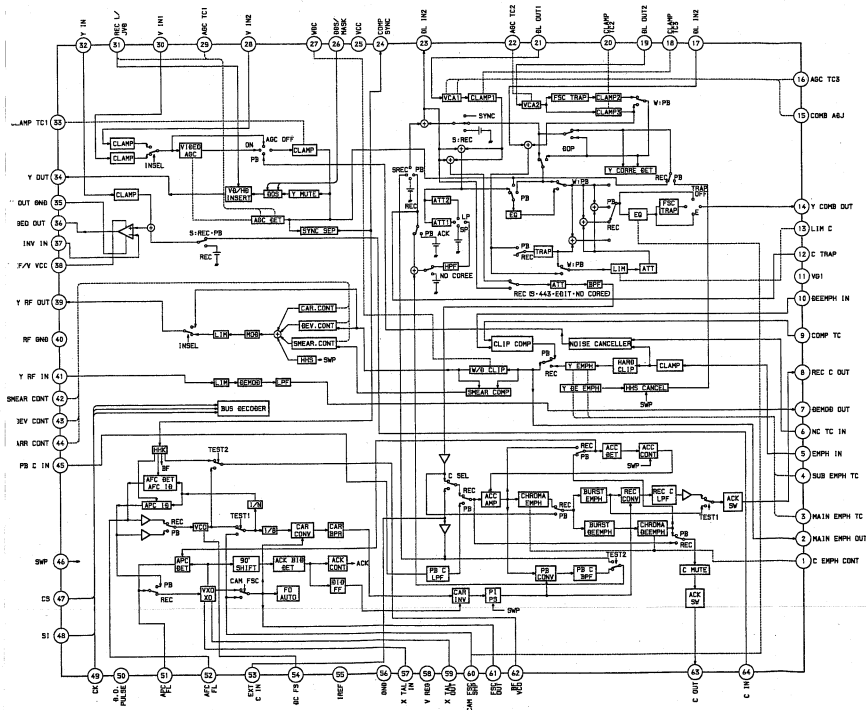


IC105 CXA1810
VIDEO PROCESS

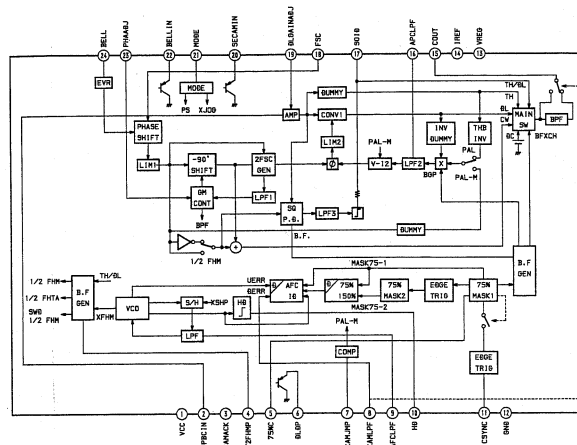


• VI-121 BOARD IC BLOCK DIAGRAMS

IC105 CXA1810 VIDEO PROCESS



IC801 M52358FP CHROMA JOG PROCESS

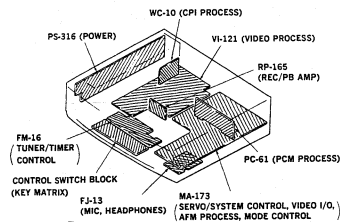


RP-165 BOARD
CN001 C-4
CN002 E-4
CN003 C-1

D001	D-2
D002	C-2
D003	E-2
D004	F-2

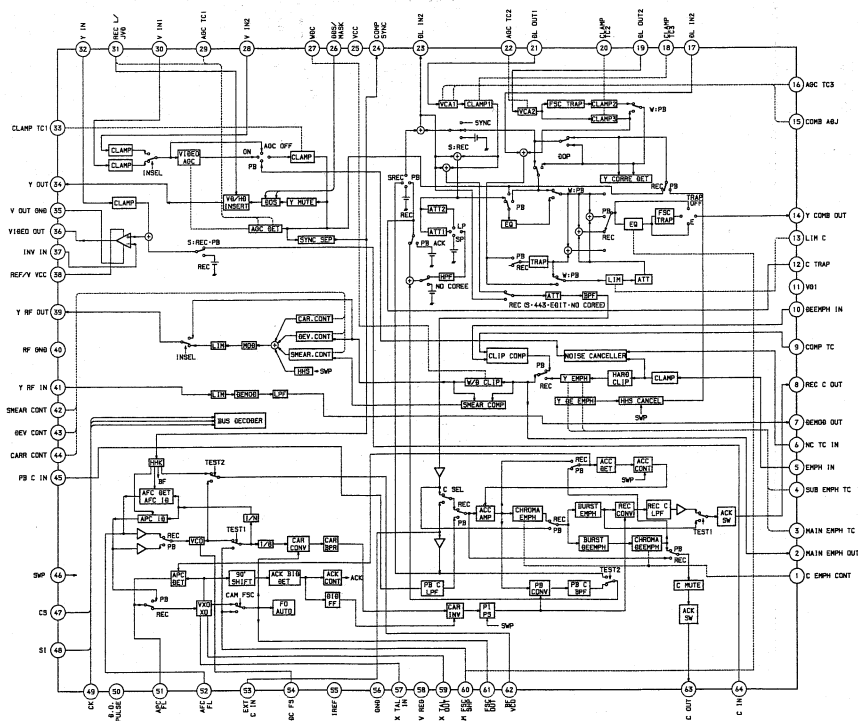
IC001 C-3

Q001	D-8
Q002	C-8
Q003	E-3
Q004	E-2
Q006	A-1
Q007	A-8
Q008	B-1
Q009	E-2
Q010	E-8
Q011	F-2
Q017	C-6
Q018	C-6
Q020	E-2

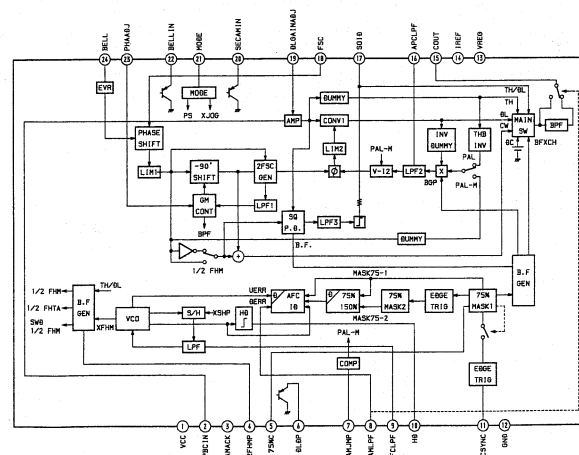


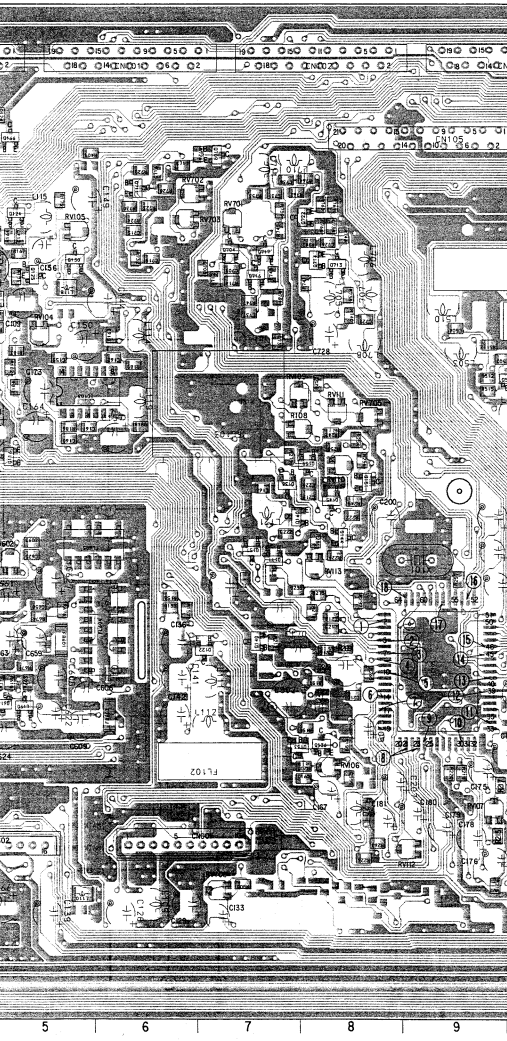
• VI-121 BOARD IC BLOCK DIAGRAMS

IC105 CXA1810
VIDEO PROCESS



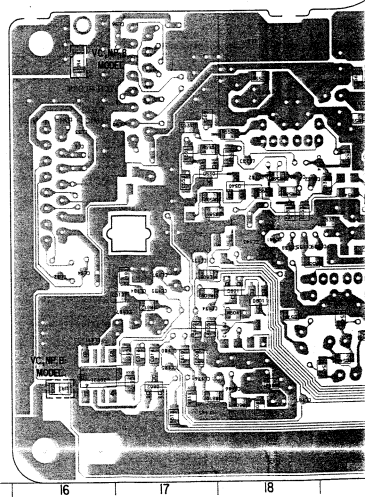
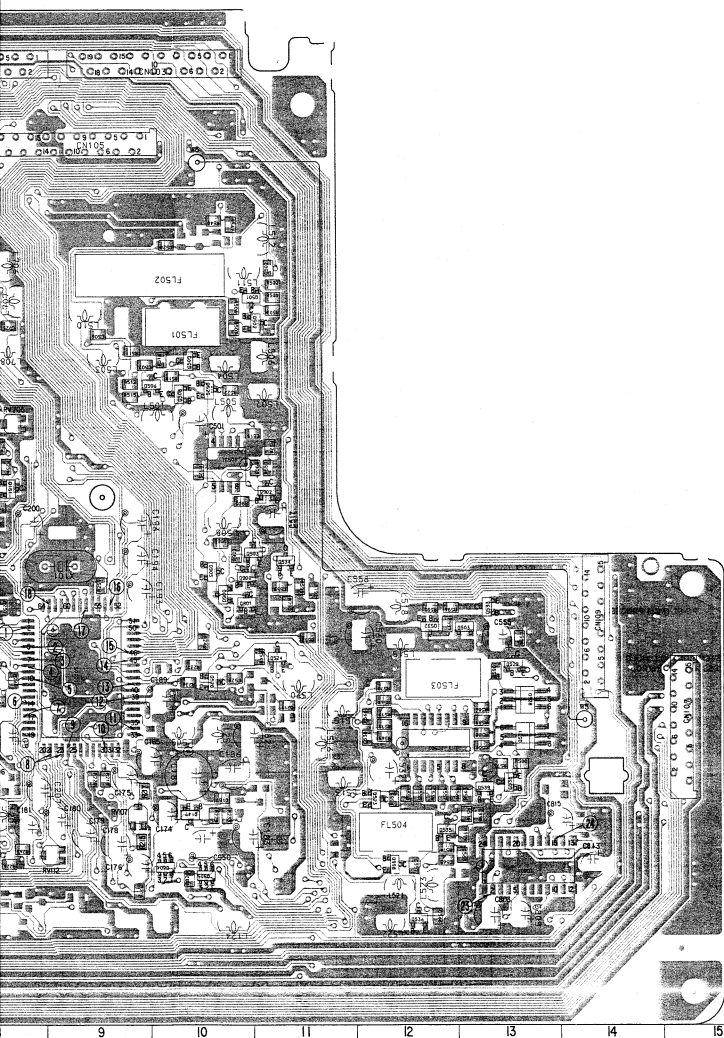
IC801 MS2358FP
CHROMA JOG PROCESS

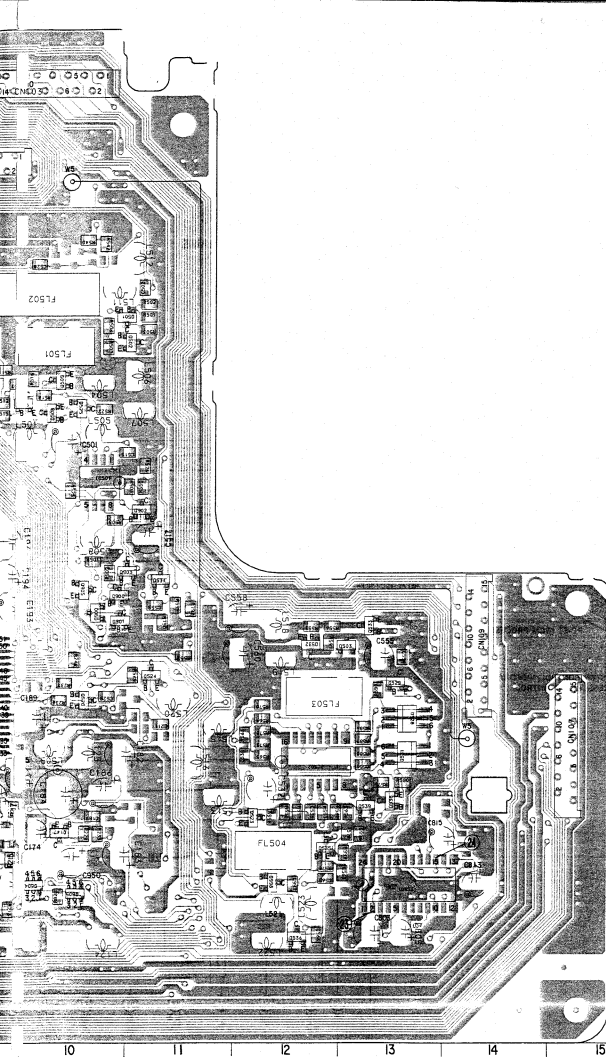




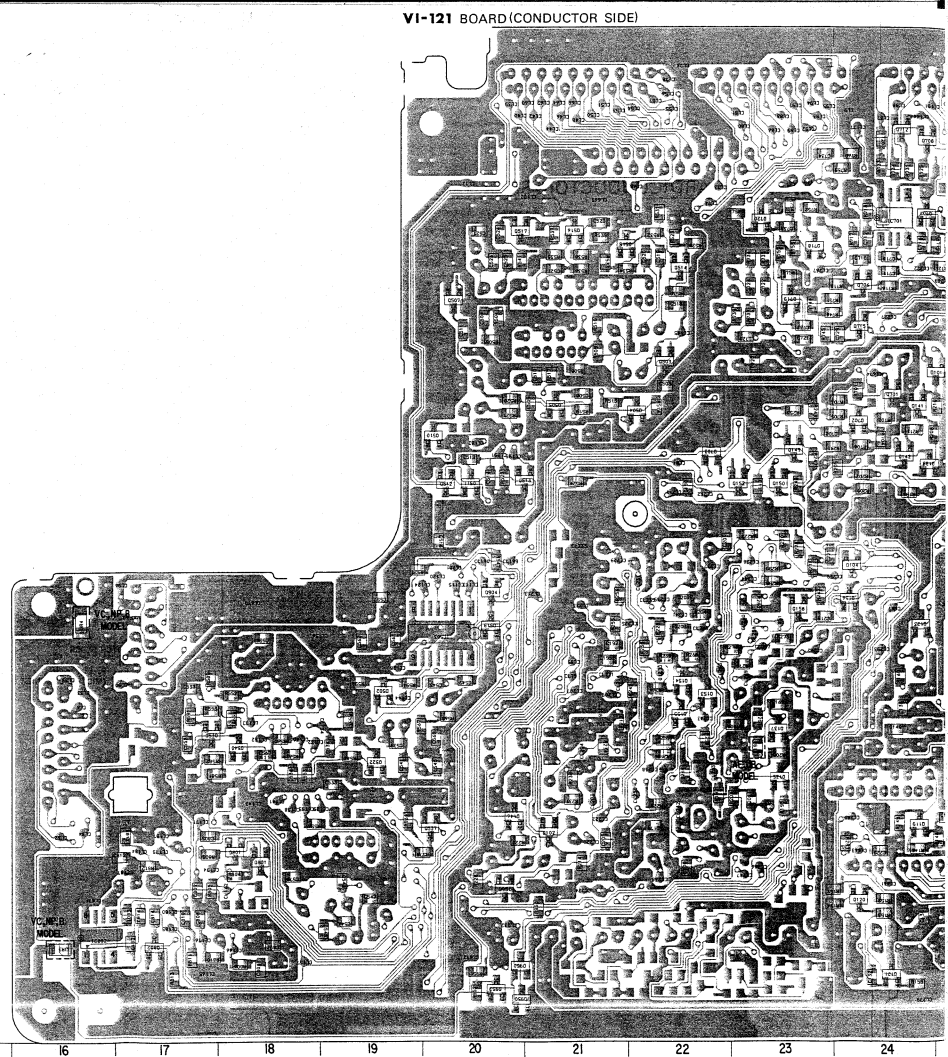
Compound	Relative Concentration
A	0.05
B	0.15
C	0.25
D	0.35
E	0.45
F	0.55
G	0.65
H	0.75
I	0.85
J	0.95
K	0.05
L	0.15
M	0.25
N	0.35

CN101	A0	0407	E 39
CN102	A0	0408	E 12
CN103	A10	0501	C11
CN104	A10	0502	C11
CN105	A9	0503	D22
CN106	A9	0504	D22
CN107	G15	0505	D1
CN108	F14	0506	D10
CN109	F14	0507	D10
CN102	A4	0508	D10
CN101	D24	0510	D20
CN102	D24	0511	D20
CN103	D24	0512	D20
D104	F34	0512	D20
D105	G19	0513	D20
D106	G19	0514	D20
D107	G19	0515	D21
D108	G19	0516	D21
D109	G19	0517	D21
D102	G21	0517	D21
D100	F10	0520	D10
IC103	D5	0522	H19
IC104	D5	0523	H19
IC105	G9	0524	G11
IC106	G9	0525	G11
IC107	G9	0526	G11
IC102	D1	0528	G13
IC103	D1	0529	G13
IC104	D9	0531	G13
IC105	D9	0532	G13
IC102	H12	0533	F12
IC103	H12	0534	F12
IC104	H12	0535	F12
IC105	H12	0536	F12
IC106	H12	0537	F12
IC104	A4	0538	G13
IC105	A4	0539	G13
IC106	A4	0540	H18
IC102	H13	0540	H18
IC103	H13	0541	H18
IC104	H13	0542	H18
IC105	H13	0543	H18
IC106	H13	0544	H18
IC107	H13	0545	H18
IC108	H13	0546	H18
IC109	H13	0547	H18
IC110	H13	0548	H18
IC111	D3	0701	D24
IC112	D3	0702	D24
IC113	D3	0703	D24
IC114	D3	0704	D24
IC115	D3	0705	D24
IC116	D3	0706	D24
IC117	D3	0707	D24
IC118	D3	0708	D24
IC119	D3	0709	D24
IC120	D3	0710	D24
IC121	D3	0711	D24
IC122	D3	0712	D24
IC123	D3	0713	D24
IC124	D3	0714	D24
IC125	D3	0715	D24
IC126	D3	0716	D24
IC127	D3	0717	D24
IC128	D3	0718	D24
IC129	D3	0719	D24
IC130	D3	0720	D24
IC131	D3	0721	D24
IC132	D25	0722	D28
IC133	D25	0723	D28
IC134	D25	0724	D28
IC135	D25	0725	D28
IC136	D25	0726	D28
IC137	D25	0727	D28
IC138	D25	0728	D28
IC139	D25	0729	D28
IC140	D25	0730	D28
IC141	D25	0731	D28
IC142	D25	0732	D28
IC143	D25	0733	D28
IC144	D25	0734	D28
IC145	D25	0735	D28
IC146	D25	0736	D28
IC147	D25	0737	D28
IC148	D25	0738	D28
IC149	D25	0739	D28
IC150	D25	0740	D28
IC151	D25	0741	D28
IC152	D25	0742	D28
IC153	D25	0743	D28
IC154	D25	0744	D28
IC155	D25	0745	D28
IC156	D25	0746	D28
IC157	D25	0747	D28
IC158	D25	0748	D28
IC159	D25	0749	D28
IC160	D25	0750	D28
IC161	D25	0751	D28
IC162	D25	0752	D28
IC163	D25	0753	D28
IC164	D25	0754	D28
IC165	D25	0755	D28
IC166	D25	0756	D28
IC167	D25	0757	D28
IC168	D25	0758	D28
IC169	D25	0759	D28
IC170	D25	0760	D28
IC171	D25	0761	D28
IC172	D25	0762	D28
IC173	D25	0763	D28
IC174	D25	0764	D28
IC175	D25	0765	D28
IC176	D25	0766	D28
IC177	D25	0767	D28
IC178	D25	0768	D28
IC179	D25	0769	D28
IC180	D25	0770	D28
IC181	D25	0771	D28
IC182	D25	0772	D28
IC183	D25	0773	D28
IC184	D25	0774	D28
IC185	D25	0775	D28
IC186	D25	0776	D28
IC187	D25	0777	D28
IC188	D25	0778	D28
IC189	D25	0779	D28
IC190	D25	0780	D28
IC191	D25	0781	D28
IC192	D25	0782	D28
IC193	D25	0783	D28
IC194	D25	0784	D28
IC195	D25	0785	D28
IC196	D25	0786	D28
IC197	D25	0787	D28
IC198	D25	0788	D28
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IC200	D25	0790	D28
IC201	D25	0791	D28
IC202	D25	0792	D28
IC203	D25	0793	D28
IC204	D25	0794	D28
IC205	D25	0795	D28
IC206	D25	0796	D28
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IC212	D25	0802	D28
IC213	D25	0803	D28
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IC216	D25	0806	D28
IC217	D25	0807	D28
IC218	D25	0808	D28
IC219	D25	0809	D28
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IC244	D25	0834	D28
IC245	D25	0835	D28
IC246	D25	0836	D28
IC247	D25	0837	D28
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IC250	D25	0840	D28
IC251	D25	0841	D28
IC252	D25	0842	D28
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IC285	D25	0875	D28
IC286	D25	0876	D28
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IC289	D25	0879	D28
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IC307	D25	0897	D28
IC308	D25	0898	D28
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IC320	D25	0910	D28
IC321	D25	0911	D28
IC322	D25	0912	D28
IC323	D25	0913	D28
IC324	D25	0914	D28
IC325	D25	0915	D28
IC326	D25	0916	D28
IC327	D25	0917	D28
IC328	D25	0918	D28
IC329	D25	0919	D28
IC330	D25	0920	D28
IC331	D25	0921	D28
IC332	D25	0922	D28
IC333	D25	0923	D28
IC334	D25	0924	D28
IC335	D25	0925	D28
IC336	D25	0926	D28
IC337	D25	0927	D28
IC338	D25	0928	D28
IC339	D25	0929	D28
IC340	D25	0930	D28
IC341	D25	0931	D28
IC342	D25	0932	D28
IC343	D25	0933	D28
IC344	D25	0934	D28
IC345	D25	0935	D28
IC346	D25	0936	D28
IC347	D25	0937	D28
IC348	D25	0938	D28
IC349	D25	0939	D28
IC350	D25	0940	D28
IC351	D25	0941	D28
IC352	D25	0942	D28
IC353	D25	0943	D28
IC354	D25	0944	D28
IC355	D25	0945	D28
IC356	D25	0946	D28
IC357	D25	0947	D28
IC358	D25	0948	D28
IC359	D25	0949	D28
IC360	D25	0950	D28
IC361	D25	0951	D28
IC362	D25	0952	D28
IC363	D25	0953	D28
IC364	D25	0954	D28
IC365	D25	0955	D28
IC366	D25	0956	D28
IC367	D25	0957	D28
IC368	D25	0958	D28
IC369	D25	0959	D28
IC370	D25	0960	D28
IC371	D25	0961	D28
IC372	D25	0962	D28
IC373	D25	0963	D28
IC374	D25	0964	D28
IC375	D25	0965	D28
IC376	D25	0966	D28
IC377	D25	0967	D28
IC378	D25	0968	D28
IC379	D25	0969	D28
IC380	D25	0970	D28
IC381	D25	0971	D28
IC382	D25	0972	D28
IC383	D25	0973	D28
IC384	D25	0974	D28
IC385	D25	0975	D28
IC386	D25	0976	D28
IC387	D25	0977	D28
IC388	D25	0978	D28
IC389	D25	0979	D28
IC390	D25	0980	D28
IC391	D25	0981	D28
IC392	D25	0982	D28
IC393	D25	0983	D28
IC394	D25	0984	D28
IC395	D25	0985	D28
IC396	D25	0986	D28
IC397	D25	0987	D28
IC398	D25	0988	D28
IC399	D25	0989	D28
IC400	D25	0990	D28
IC401	D25	0991	D28
IC402	D25	0992	D28
IC403	D25	0993	D28
IC404	D25	0994	D28
IC405	D25	0995	D28
IC406	D25	0996	D28
IC407	D25	0997	D28
IC408	D25	0998	D28
IC40			

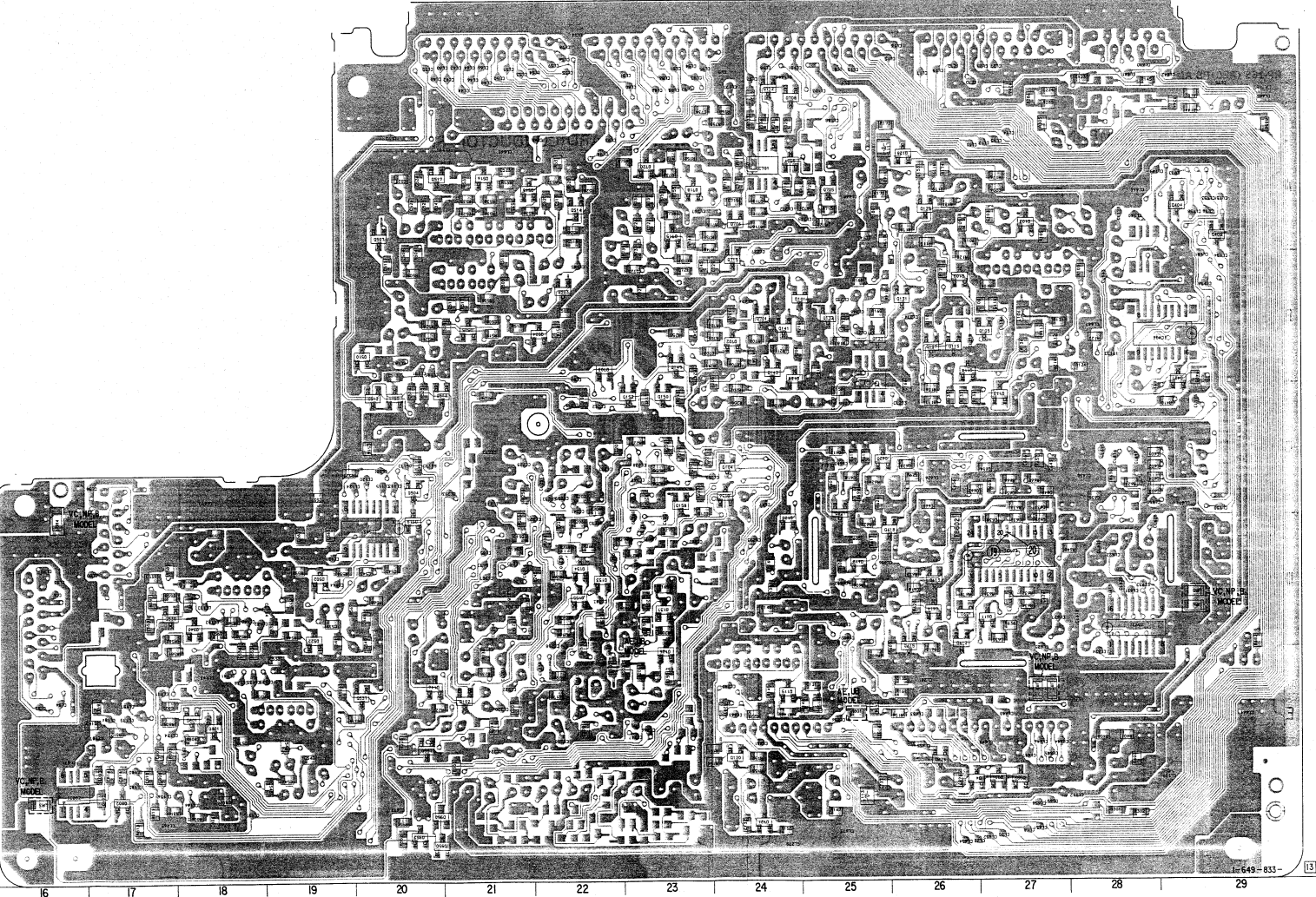




10 11 12 13 14 15



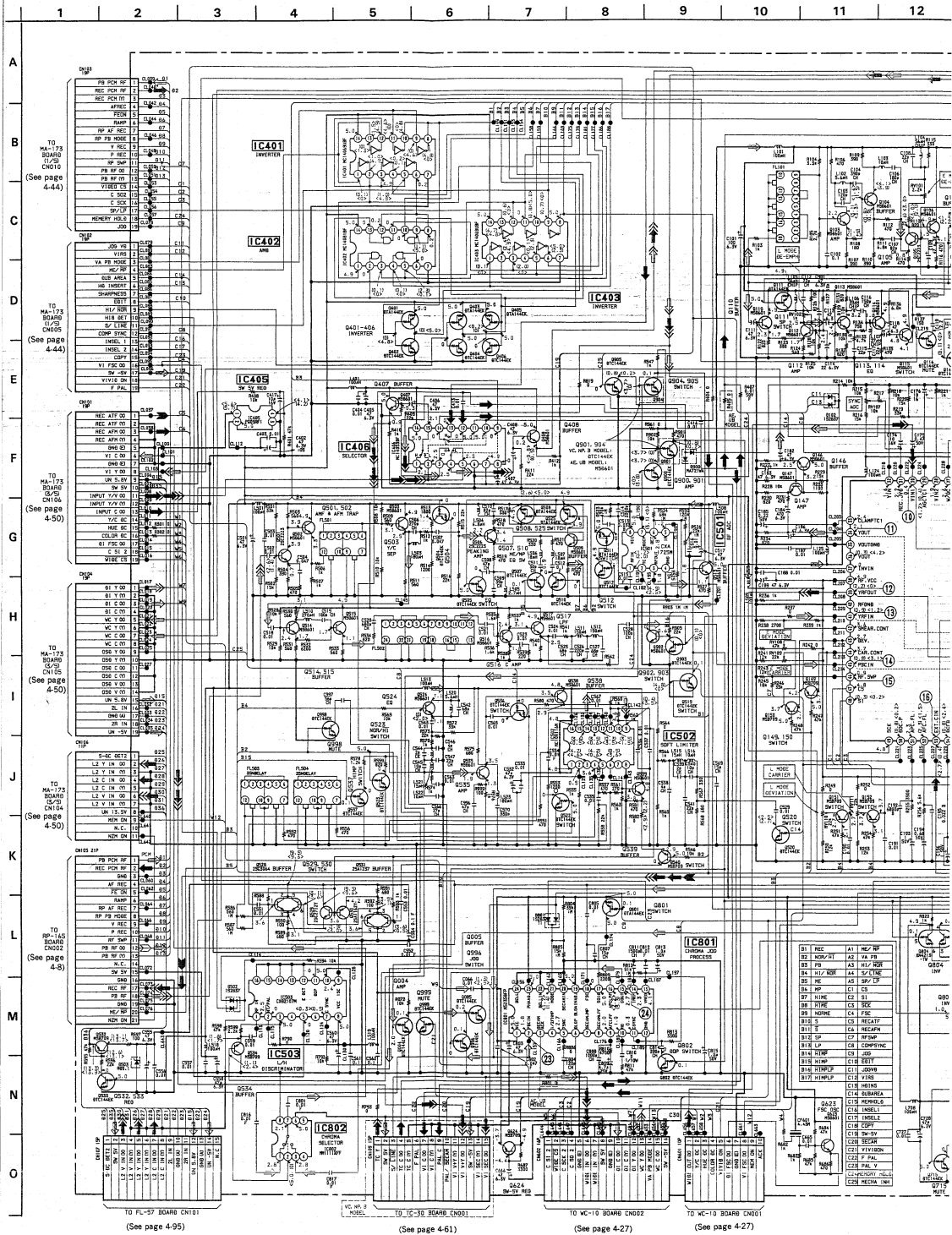
16 17 18 19 20 21 22 23 24

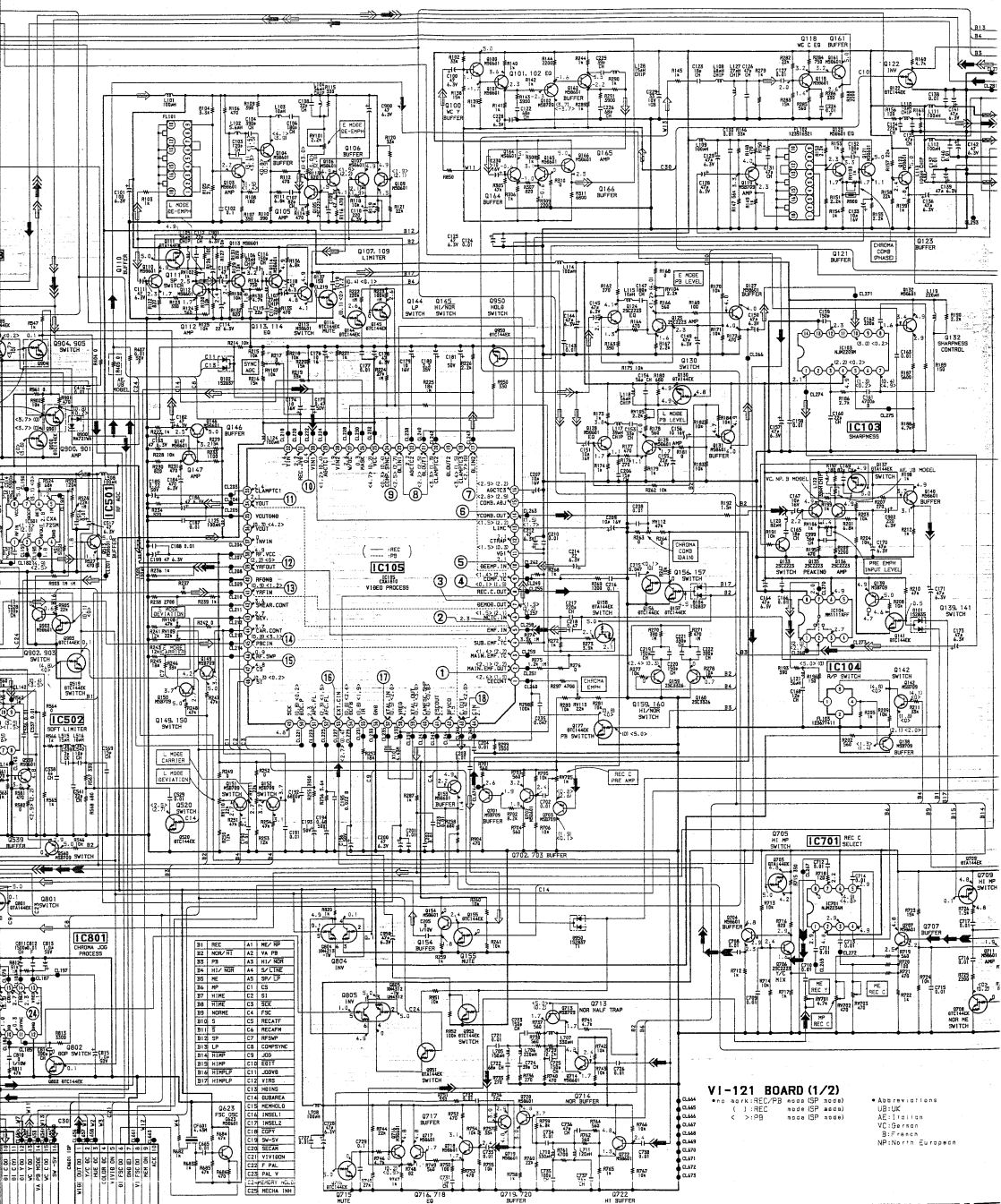


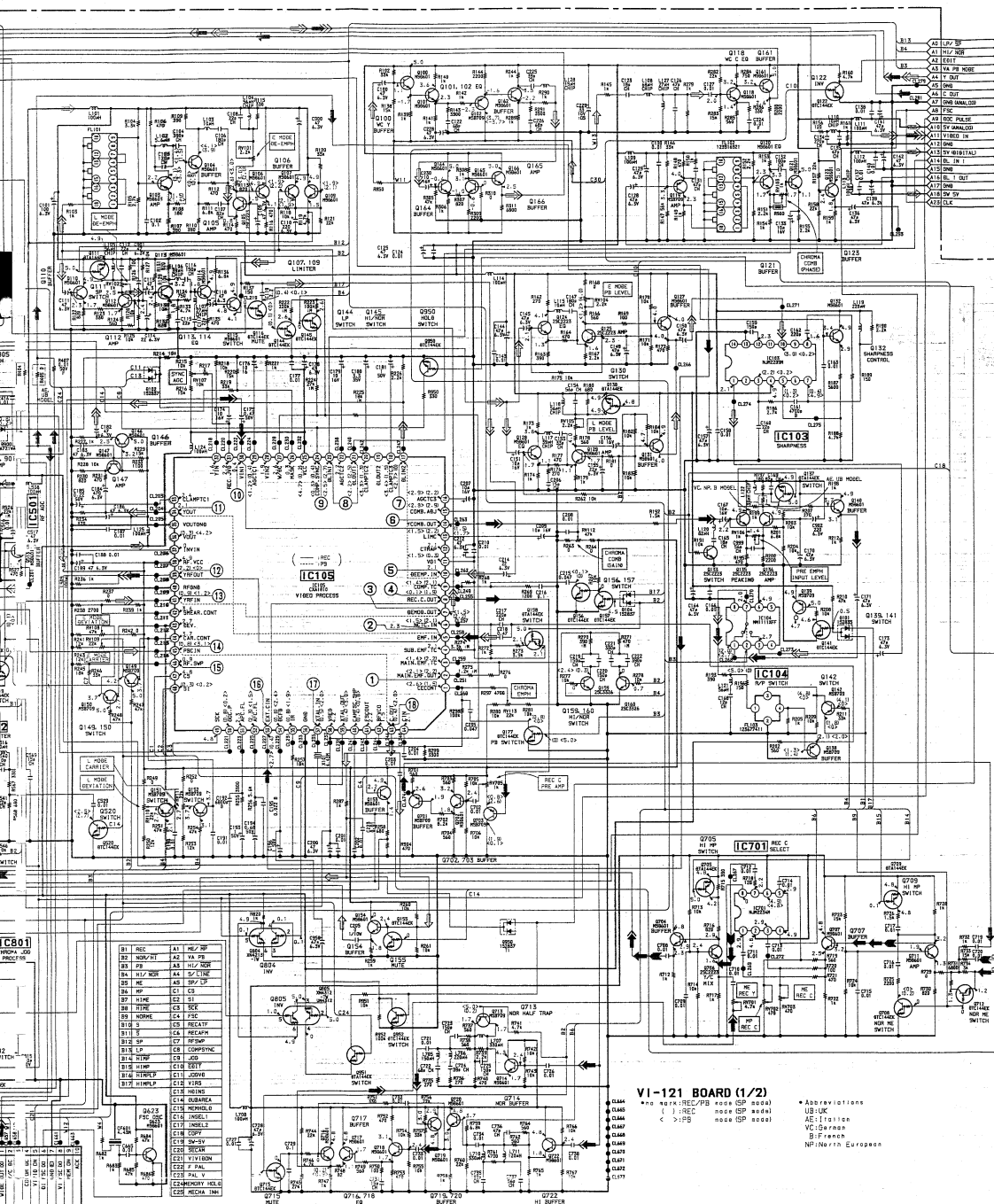
VI-121 (VIDEO PROCESS) SCHEMATIC DIAGRAM

—Ref. No. VI121 BOARD: 2000 series—

●Refer to page 4-11 for IC block diagrams of IC105 and IC801 on VI-121 board.

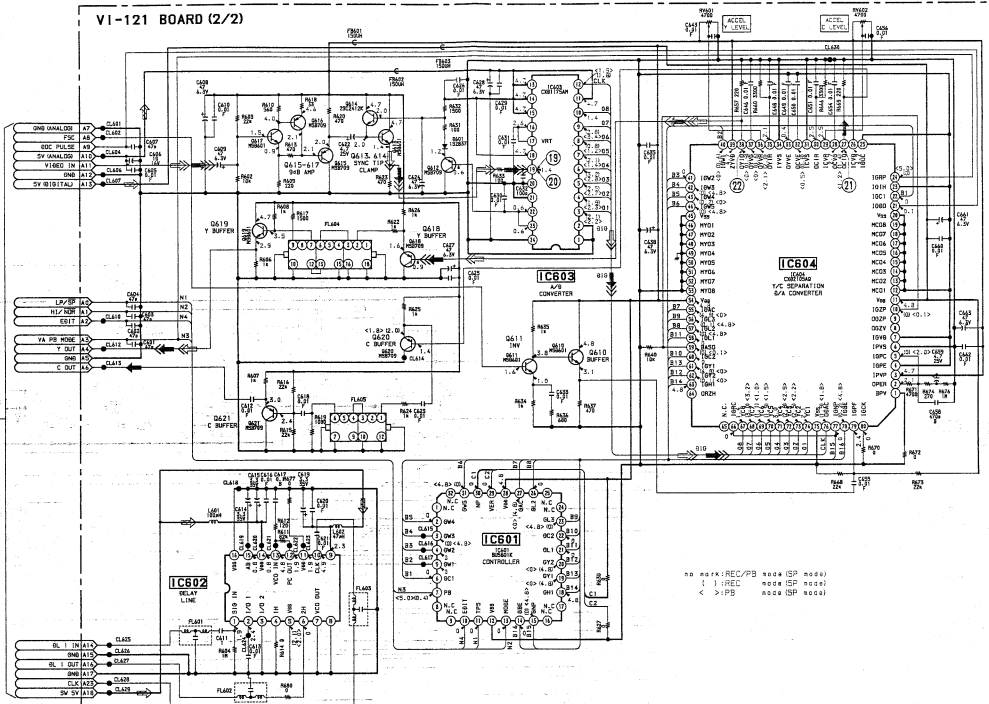




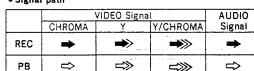


21 22 23 24 25 26 27 28 29 30 31 32 33

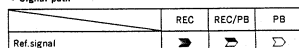
V1-121 BOARD (2/2)



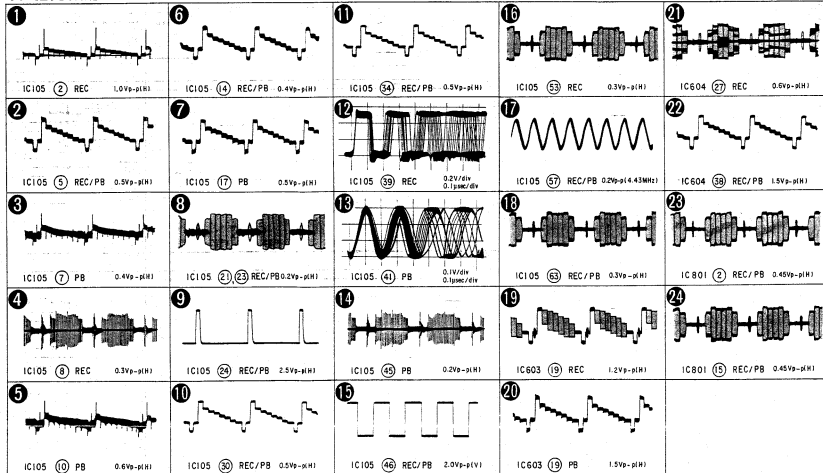
• Signal path



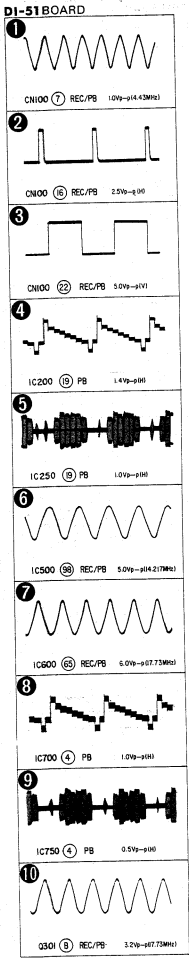
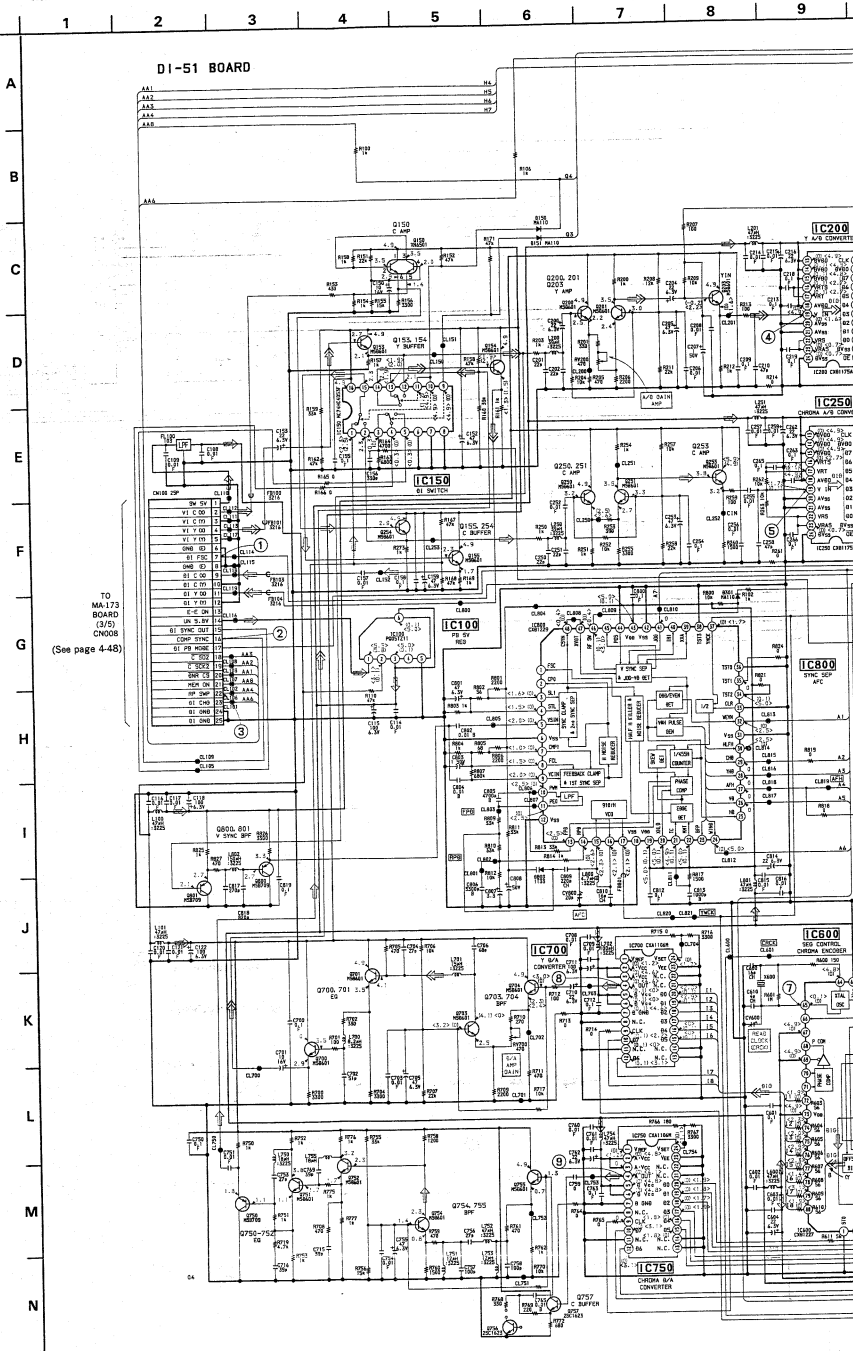
• Signal path



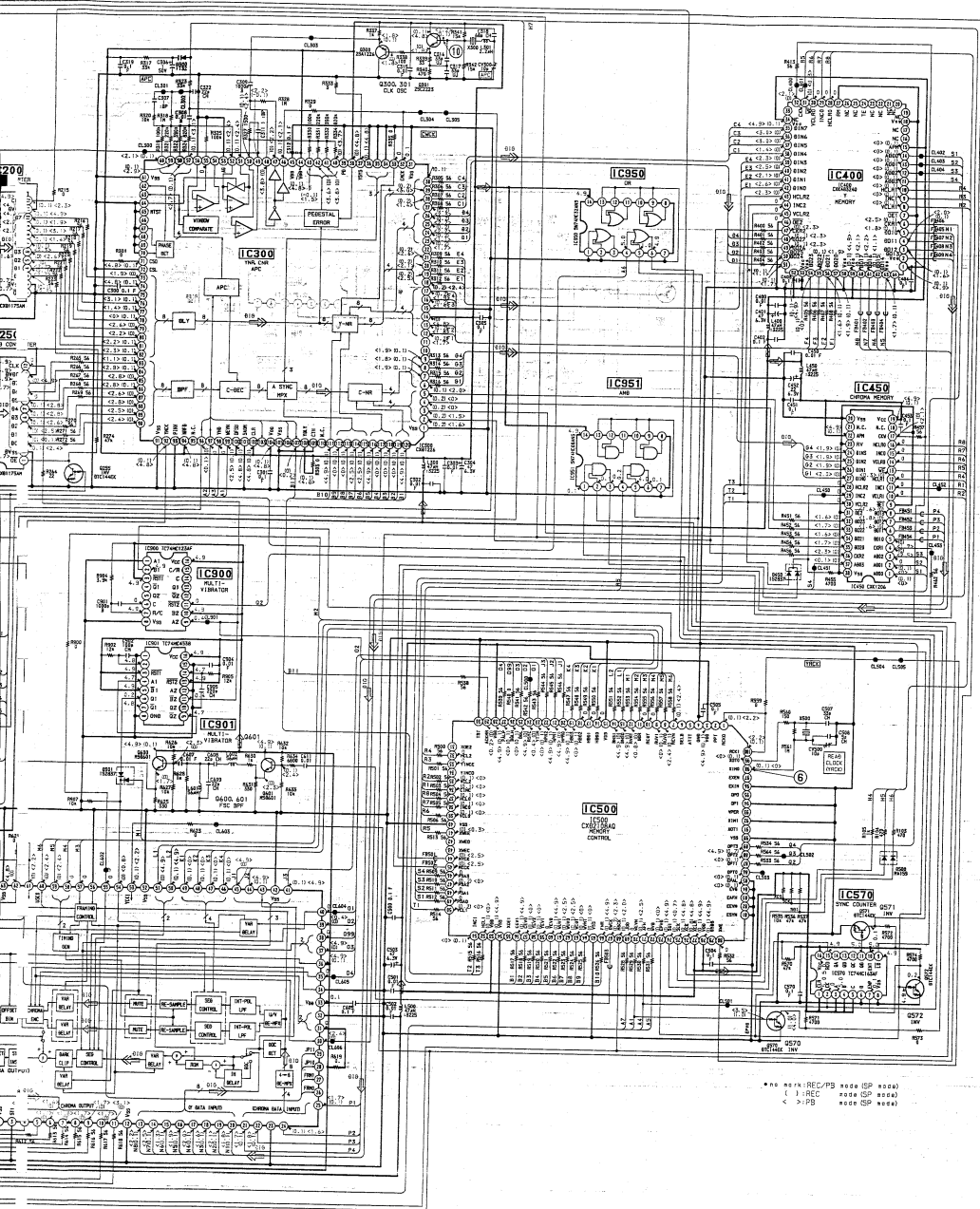
V1-121 BOARD



DI-51 (DIGITAL PROCESS), WC-10 (CPI PROCESS) SCHEMATIC DIAGRAMS
—Ref. No. DI-51 BOARD: 1000 series, WC-10 BOARD: 2000 series—



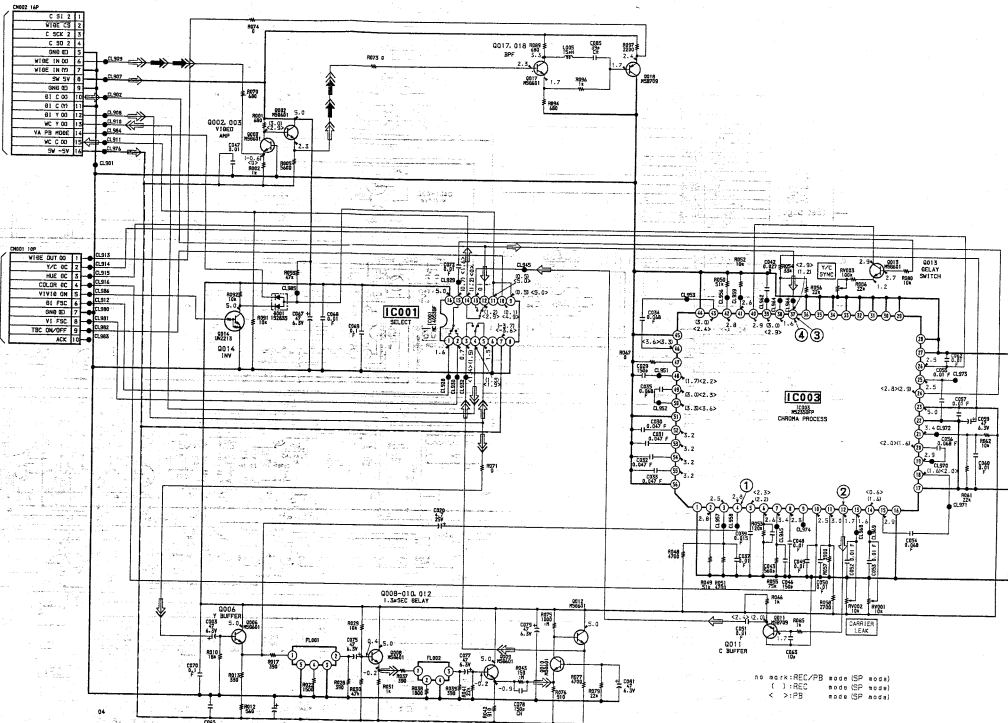




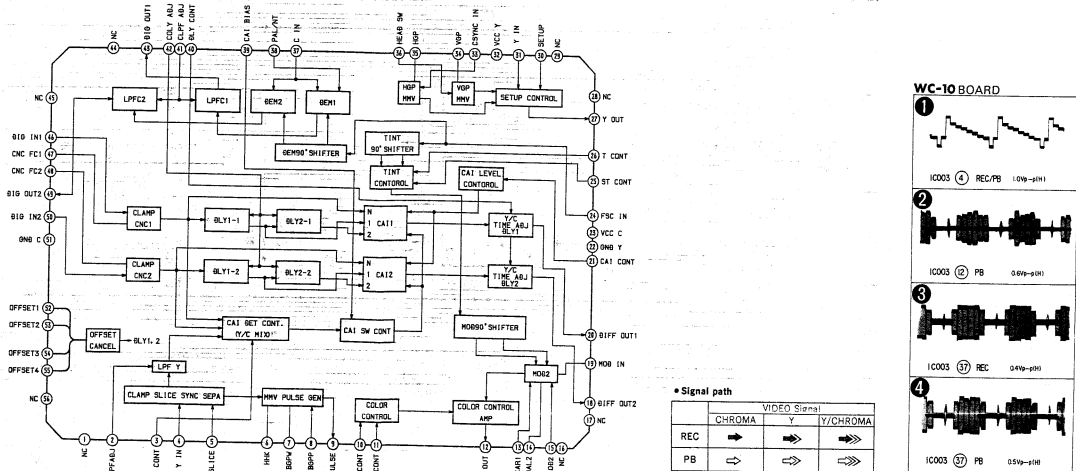
(See page 4-20)

(See page 4-20)

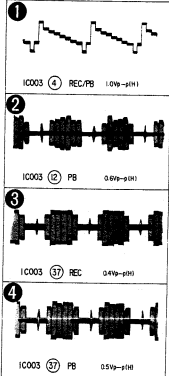
WC-10 BOARD



IC003 MS2350FP CHROMA PROCESS



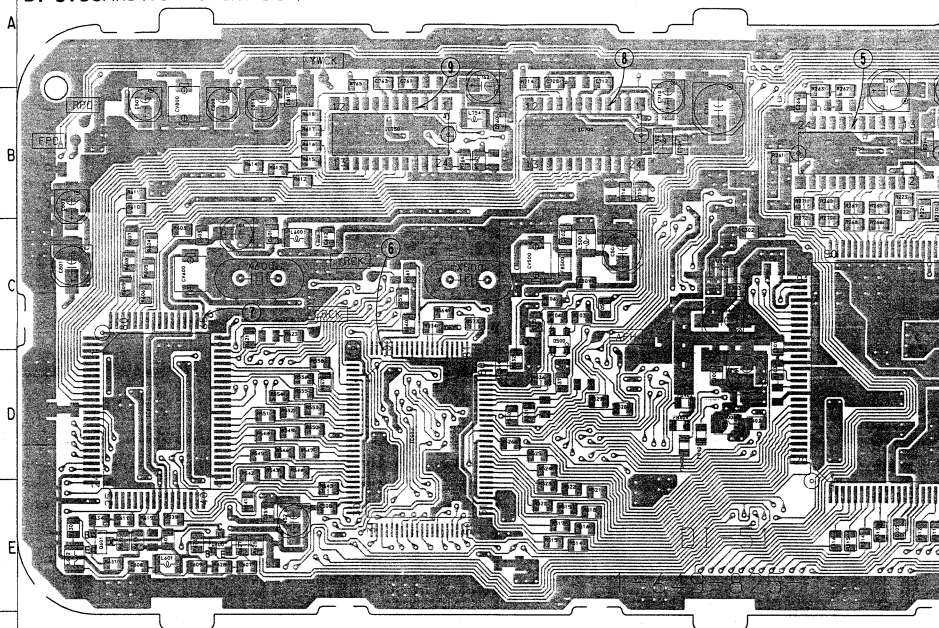
WC-10 BOARD



Signal path

	VIDEO Signal		
	CHROMA	Y	Y/CHROMA
REC	→	→	→
PB	→	→	→

DI-51 BOARD (COMPONENT SIDE)



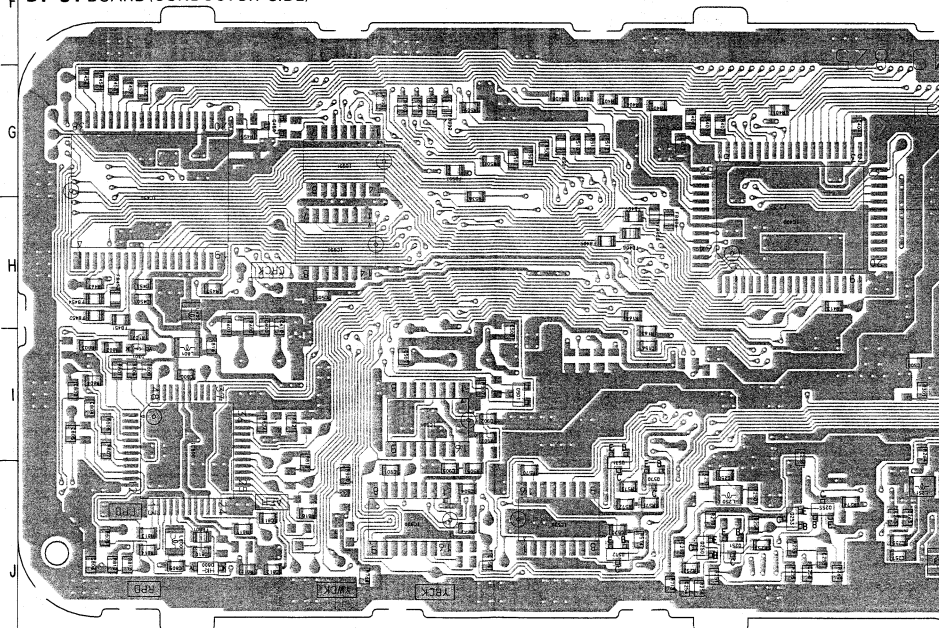
DI-51 BOARD
 CN100 A10

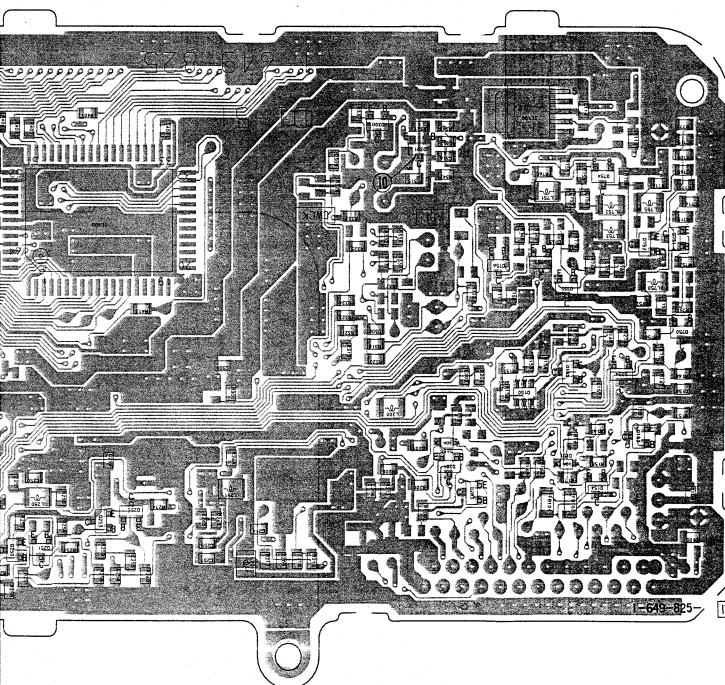
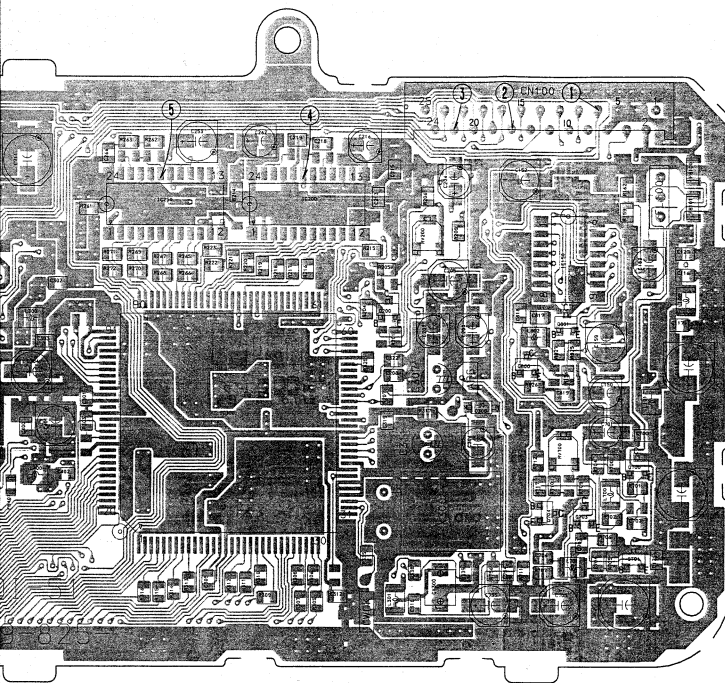
D150 19
 D151 110
 D300 D-9
 Q301 11
 D450 G-2
 D500 C-5
 D800 J-2
 D901 14

IC100 G-10
 IC150 B-10
 IC200 B-8
 IC250 B-7
 IC300 D-7
 IC400 H-7
 IC450 G-1
 IC500 D-4
 IC570 J-5
 IC600 D-2
 IC700 B-5
 IC750 B-3
 IC800 12
 IC900 J-4
 IC901 14
 IC950 H-3
 IC961 G-3

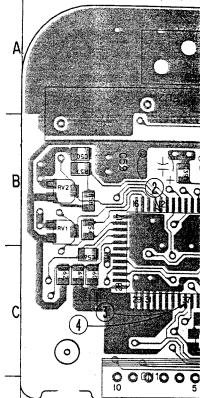
Q150 110
 Q153 110
 Q154 J10
 Q155 110
 Q200 C-9
 Q201 J-9
 Q203 J-9
 Q220 J-6
 Q231 J-6
 Q253 J-7
 Q254 110
 Q255 J-7
 Q300 G-9
 Q301 G-9
 Q570 J-5
 Q571 J-5
 Q572 J-5
 Q600 E-2
 Q601 E-1
 Q700 D-10
 Q701 E-10
 Q703 D-10
 Q704 D-10
 Q750 110
 Q751 H-10
 Q752 H-10
 Q754 G-10
 Q755 H-10
 Q756 H-10
 Q757 H-10
 Q800 C-10
 Q801 C-10

DI-51 BOARD (CONDUCTOR SIDE)

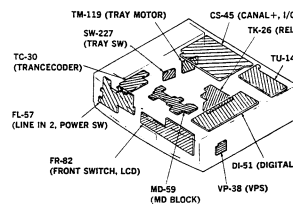
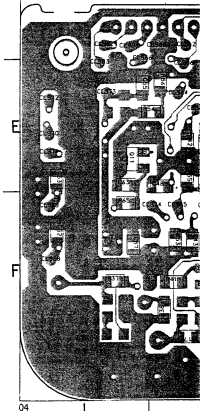


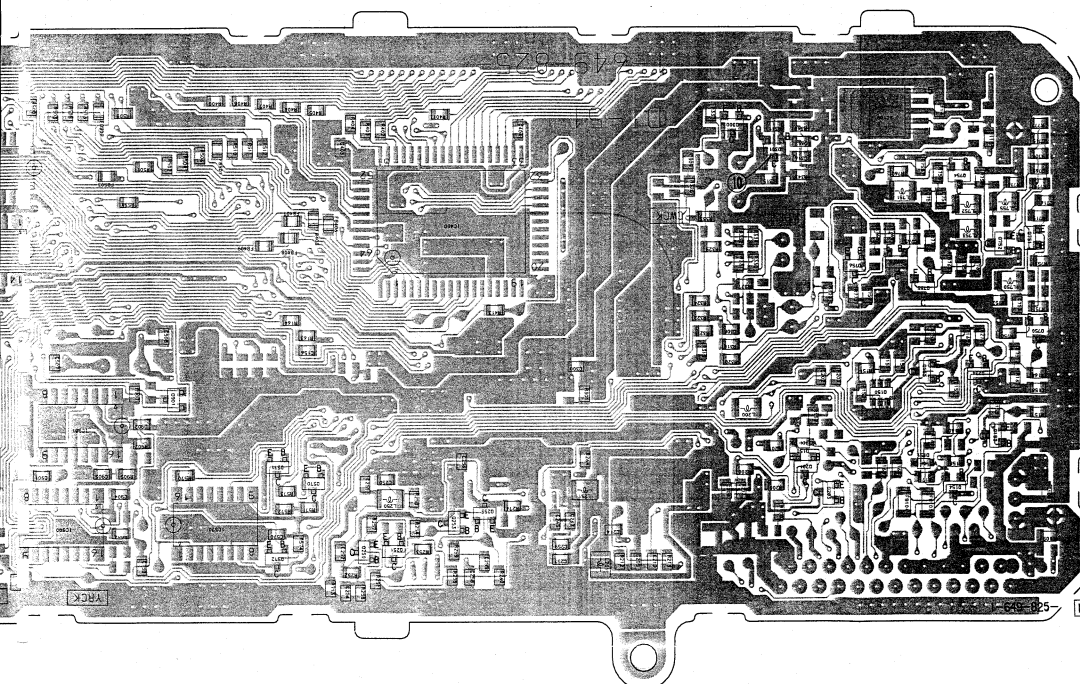


WC-10 BOARD (COM)

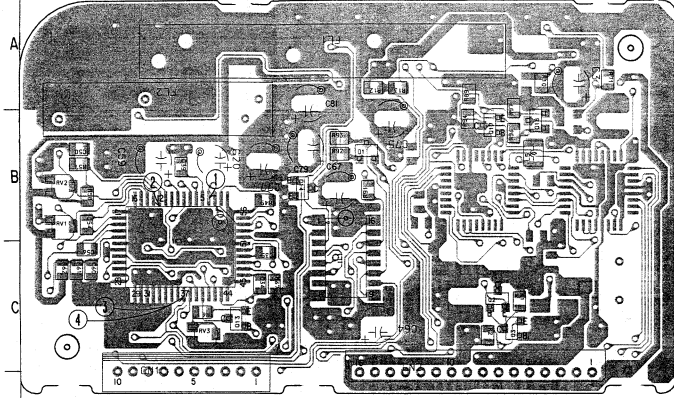


WC-10 BOARD (CON)





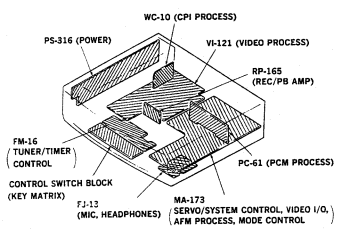
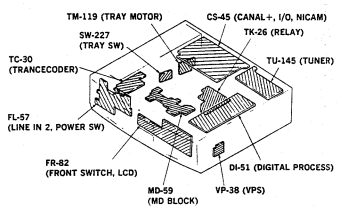
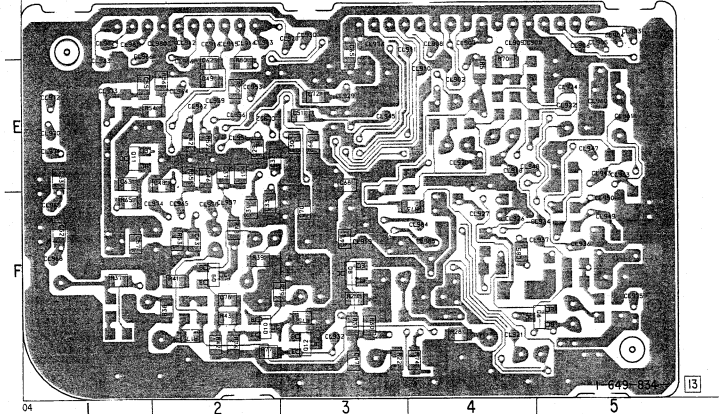
WC-10 BOARD (COMPONENT SIDE)



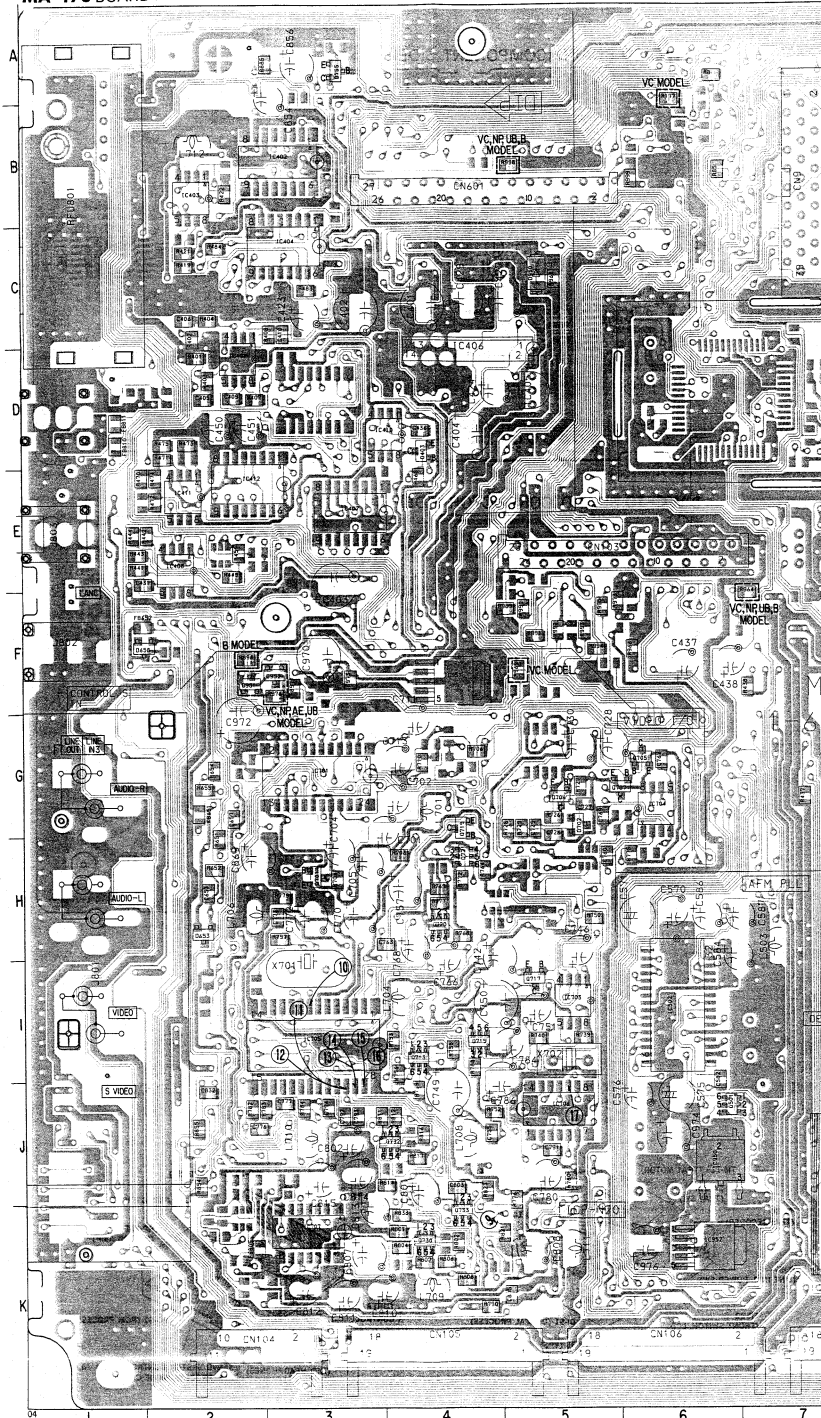
WC-10 BOARD

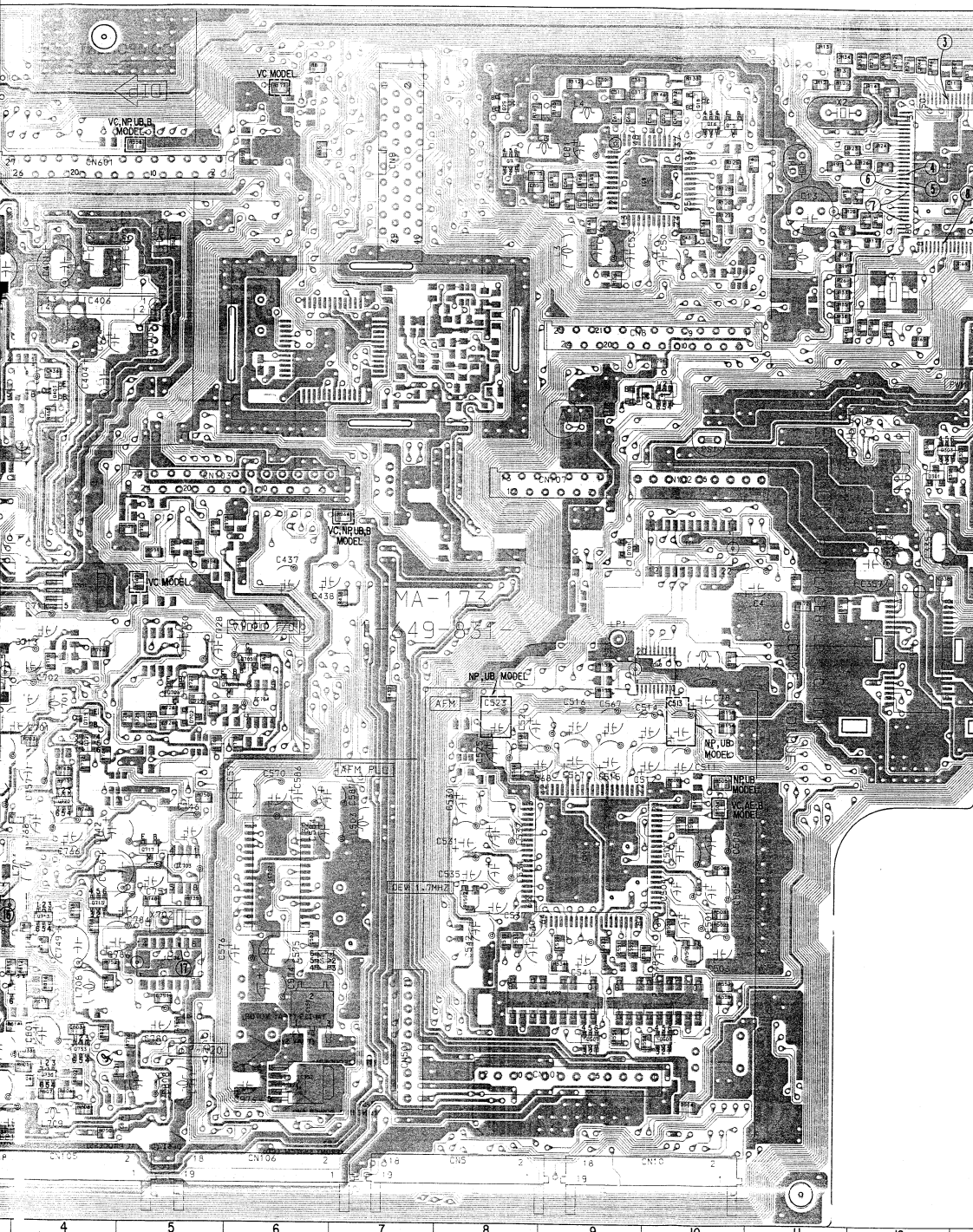
CN001	C1
CN002	C4
D001	B-3
IC001	C3
IC003	C2
Q002	C4
Q003	C4
Q006	F5
Q008	F3
Q009	F2
Q010	F2
Q011	E1
Q012	F3
Q013	C2
Q014	B3
Q017	B4
Q018	B5

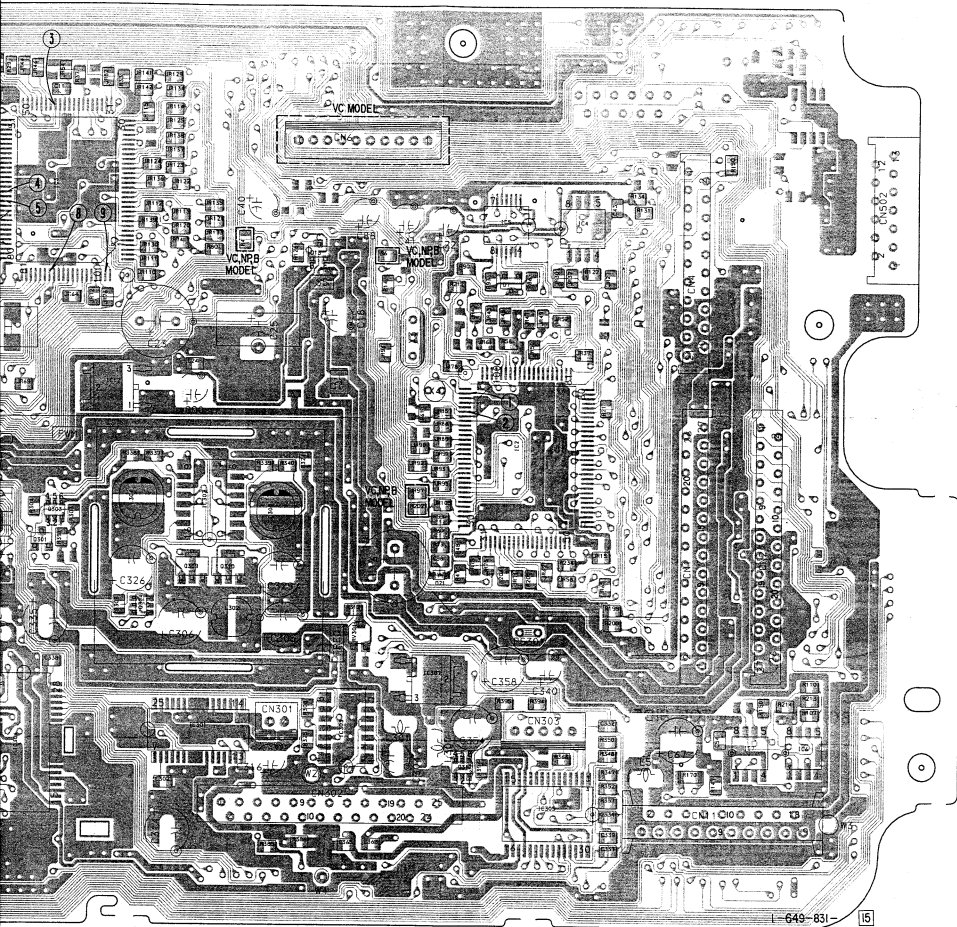
D WC-10 BOARD (CONDUCTOR SIDE)



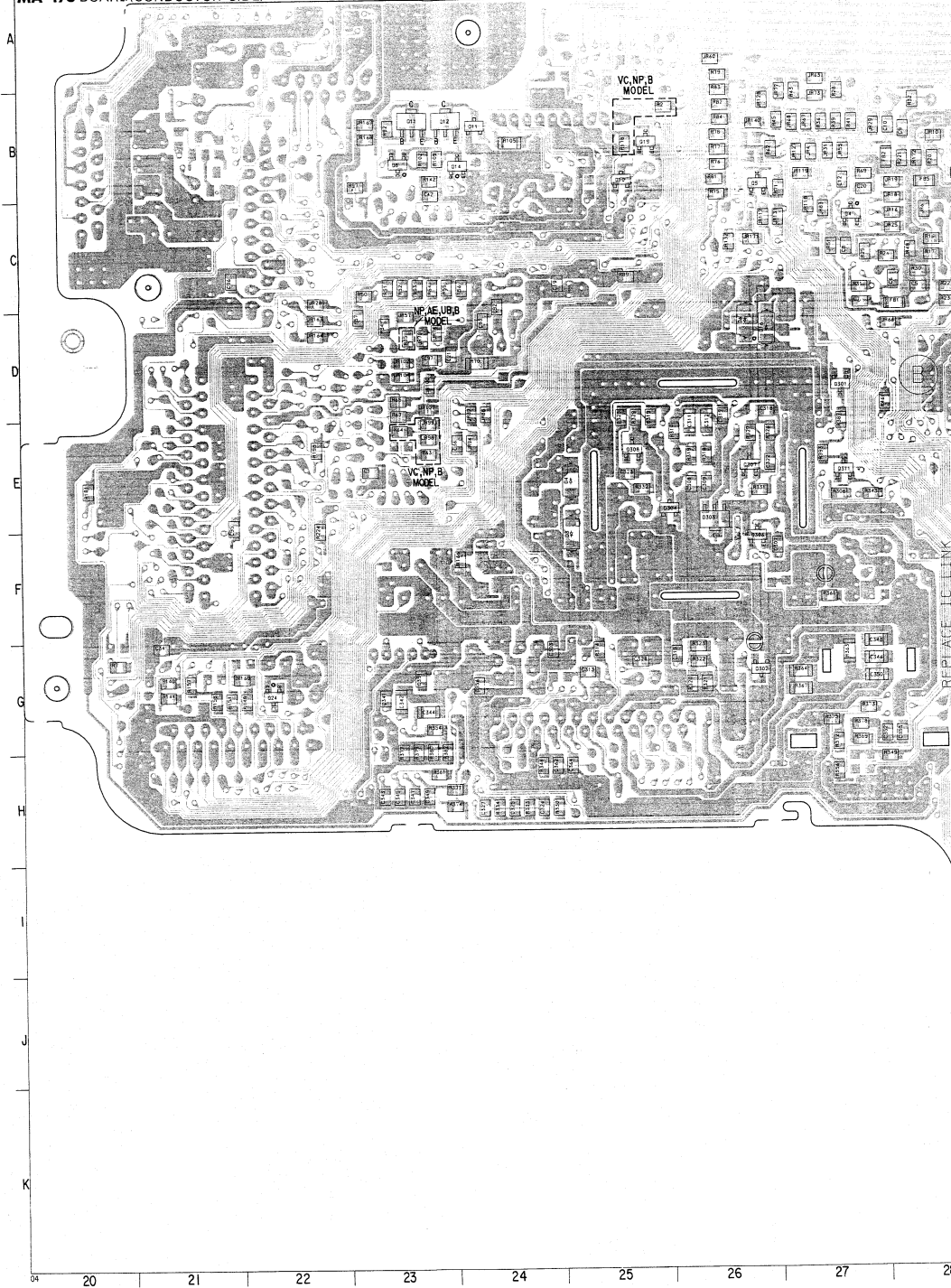
MA-173 BOARD (COMPONENT SIDE)



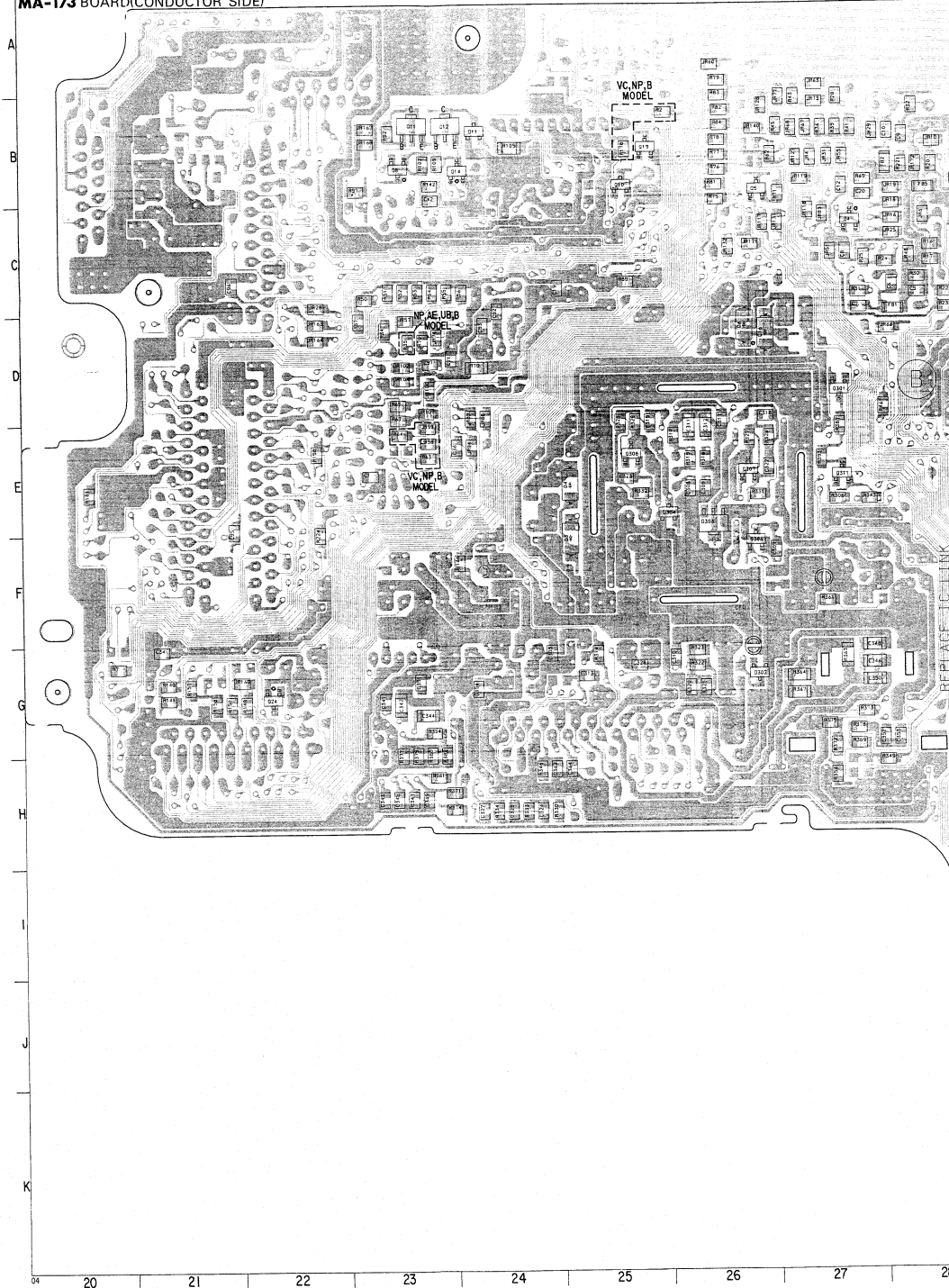


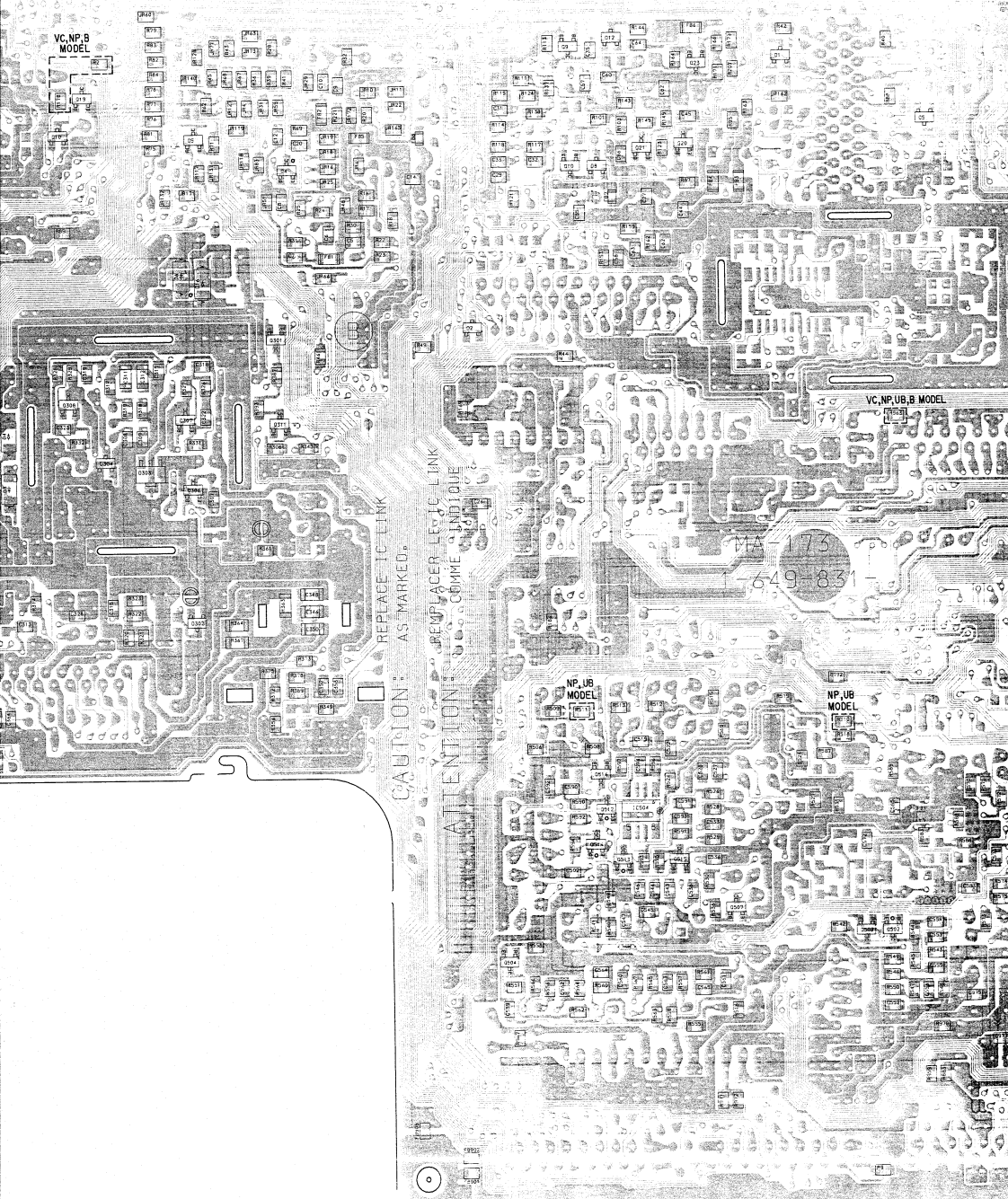


MA-173 BOARD(CONDUCTOR SIDE)



MA-173 BOARD(CONDUCTOR SIDE)







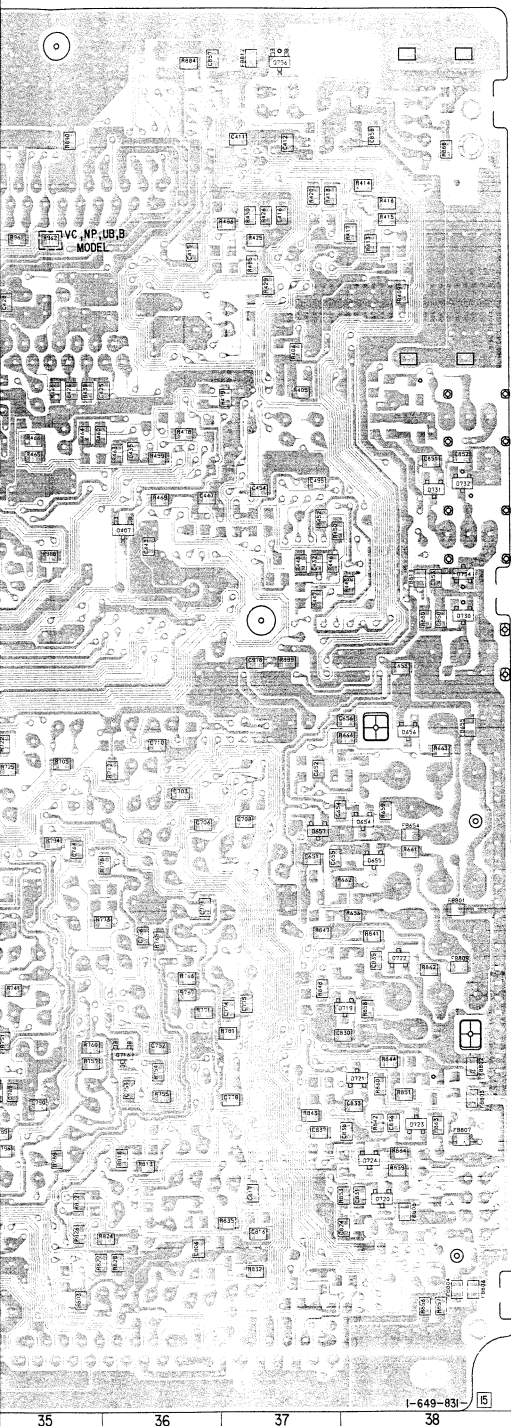
CAUTION: REPLACE TO LINK
REPLACEUR LE LIAISON
ATTENTION: COMME L'INDIQUE

NP, UB
MODEL

VC, NP, UB, S MODEL

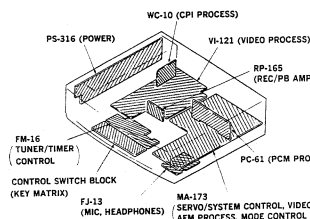
MA 649 B31

NP, UB
MODEL



MA-173 BOARD

CN001	E18	IC504	H30
CN002	E18	IC701	G3
CN004	C18	IC703	I5
CN005	H8	IC704	G6
CN006	B15	IC705	I3
CN008	D9	IC706	J5
CN009	B7	IC707	K3
CN010	K10	IC980	J6
CN011	G18	IC981	F4
CN101	K9	IC952	K6
CN102	E10		
CN103	E5	Q001	D10
CN104	K2	Q003	D9
CN105	K4	Q004	B27
CN106	K6	Q005	B26
CN107	E9	Q007	B8
CN101	F14	Q008	B23
CN302	G15	Q009	A30
CN303	F17	Q010	B30
CN501	J7	Q011	B23
CN502	G19	Q012	B23
CN601	B4	Q013	B15
		Q014	B24
		Q015	B10
D001	A32	Q016	B10
D002	D29	Q018	A10
D003	E25	Q019	B25
D004	E25	Q020	B31
D005	D33	Q021	B31
D006	C26	Q023	B31
D007	C16	Q024	G22
D008	B30	Q025	A8
D010	B25	Q026	E26
D011	B24	Q030	D27
D012	A30	Q303	E12
D016	C26	Q304	E13
D021	E16	Q306	E26
D021	E12	Q307	E26
D032	G26	Q308	E25
D033	E26	Q309	E14
D034	E25	Q310	E14
D035	H2	Q311	E27
D036	G38	Q312	G16
D037	G38	Q403	D4
D038	F38	Q407	E36
D039	G37	Q501	J6
D040	F1	Q502	I33
D041	E9	Q503	I33
D042	G5	Q504	J29
D043	H8	Q507	I31
D044	J38	Q508	J10
D045	J38	Q509	J9
D046	H36	Q512	H30
D047	J38	Q513	I30
D048	J38	Q514	I30
D049	E38	Q515	I31
D050	D38	Q516	H30
D051	D38	Q701	H3
D052	E38	Q705	G6
D053	G5	Q706	G5
D054	F2	Q707	G5
D055	F3	Q713	I4
D056	F10	Q715	I4
D057	D16	Q717	H5
D058	B12	Q719	G4
D059	B17	Q720	H4
D060	B16	Q721	G4
D061	G19	Q730	K4
D062	G18	Q732	J4
D063	B10	Q733	J4
D064	G10	Q755	A3
D065	D13	Q756	A37
D066	F14		
D067	E14		
D068	F15		
D069	G17		
D070	G12		
D071	F16		
D072	C2		
D073	B3		
D074	B2		
D075	B3		
D076	D4		
D077	E3		
D078	D2		
D079	D4		
D080	L1		
D081	D2		
D082	D2		
D083	D2		
D084	D2		
D085	D2		
D086	D2		
D087	D2		
D088	D2		
D089	D2		
D090	D2		
D091	D2		
D092	D2		
D093	D2		
D094	D2		
D095	D2		
D096	D2		
D097	D2		
D098	D2		
D099	D2		
D100	D2		





(See page 4-50)

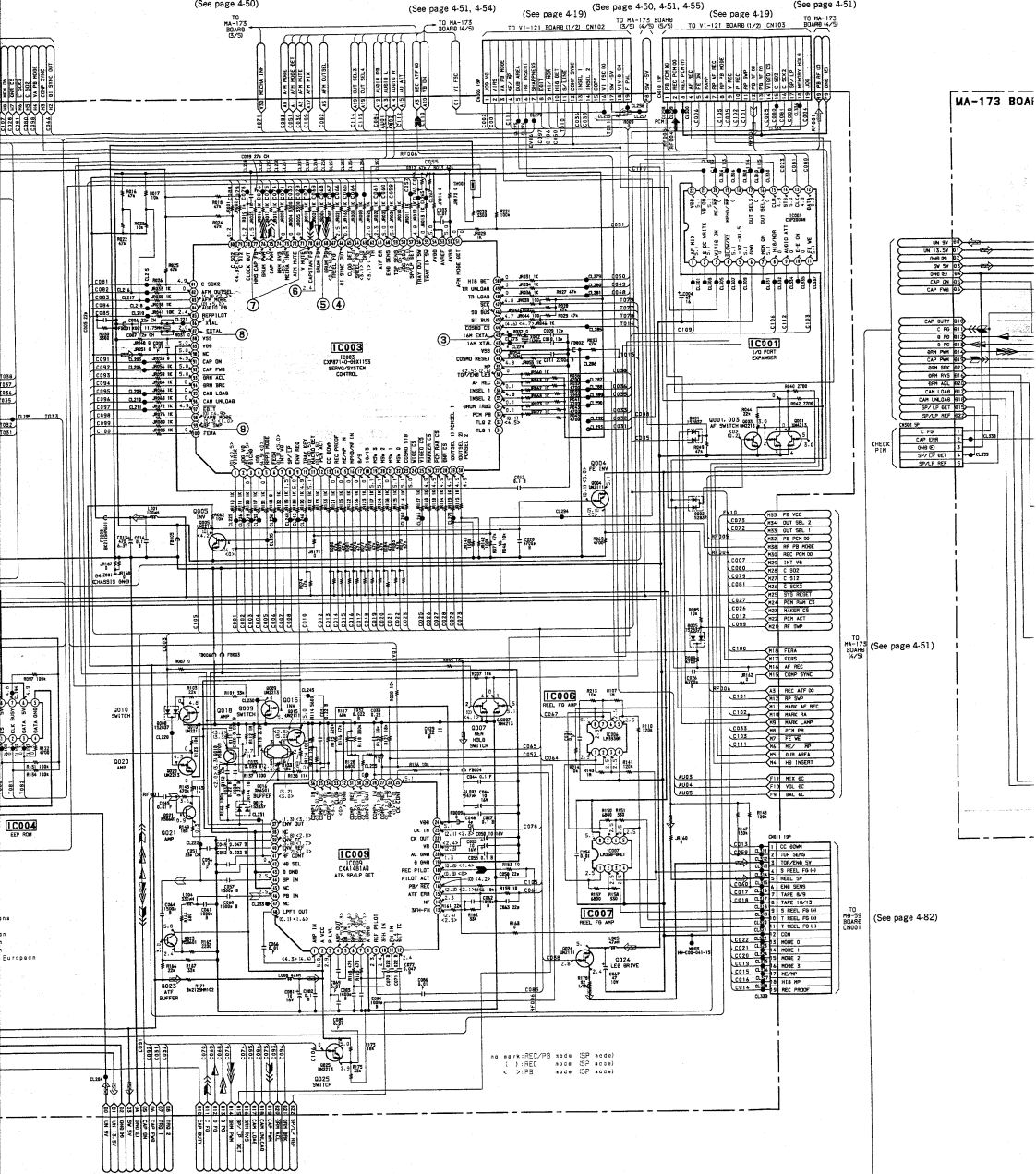
(See page 4-51, 4-54)

(See page 4-19)

(See page 4-50, 4-51, 4-55)

(See page 4-19)

(See page 4-51)

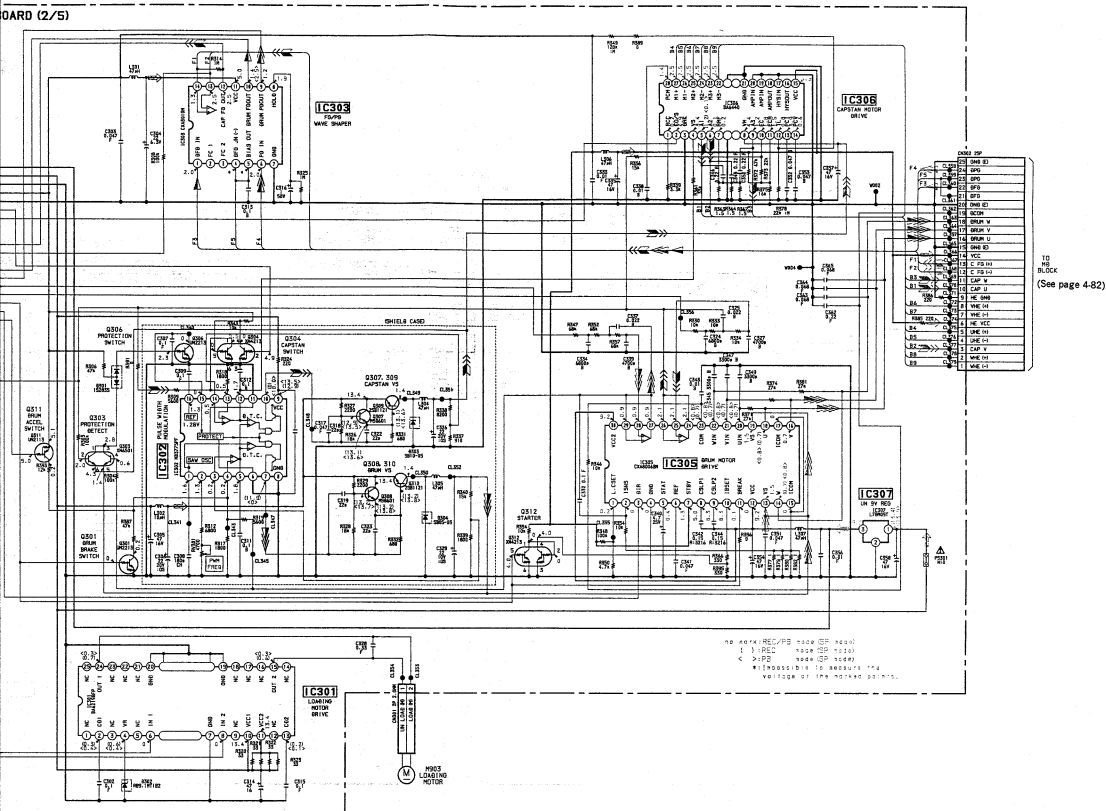


MA-173 BOA

(See page 4-51)

(See page 4-82)

BOARD (2/5)



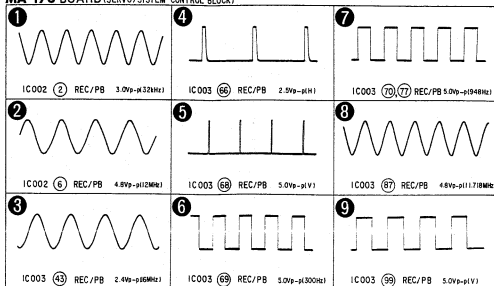
• Signal path

	CHROMA	V/CHROMA	AUDIO
REC	→	→	→
PB	→	→	→

• Signal path

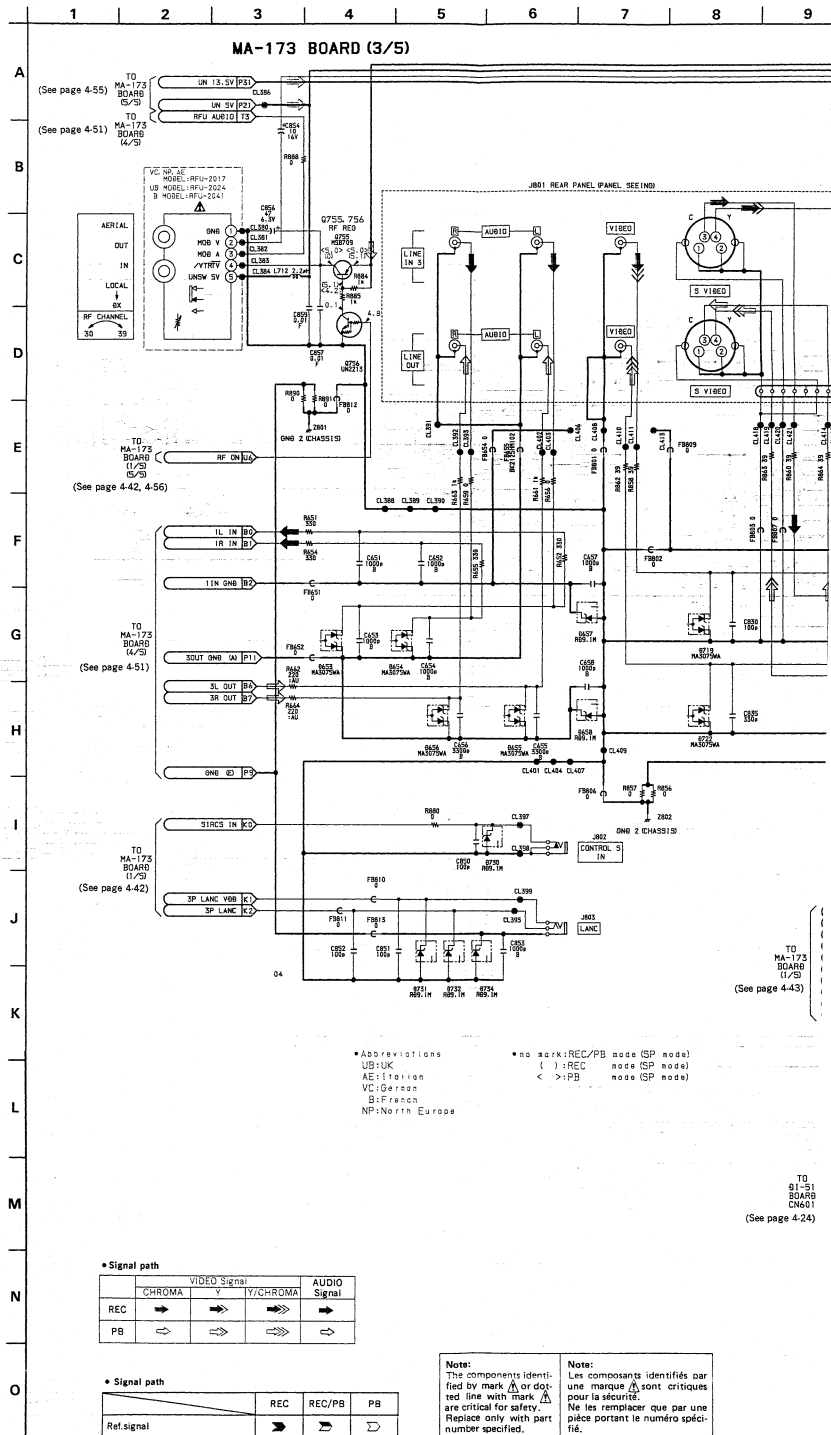
	REC	REC/PB	PB
Drum speed servo	→	→	→
Drum phase servo	→	→	→
Drum servo(speed and phase)	→	→	→
Capstan speed servo	→	→	→
Capstan phase servo	→	→	→
Capstan servo(speed and phase)	→	→	→
Ref.signal	→	→	→

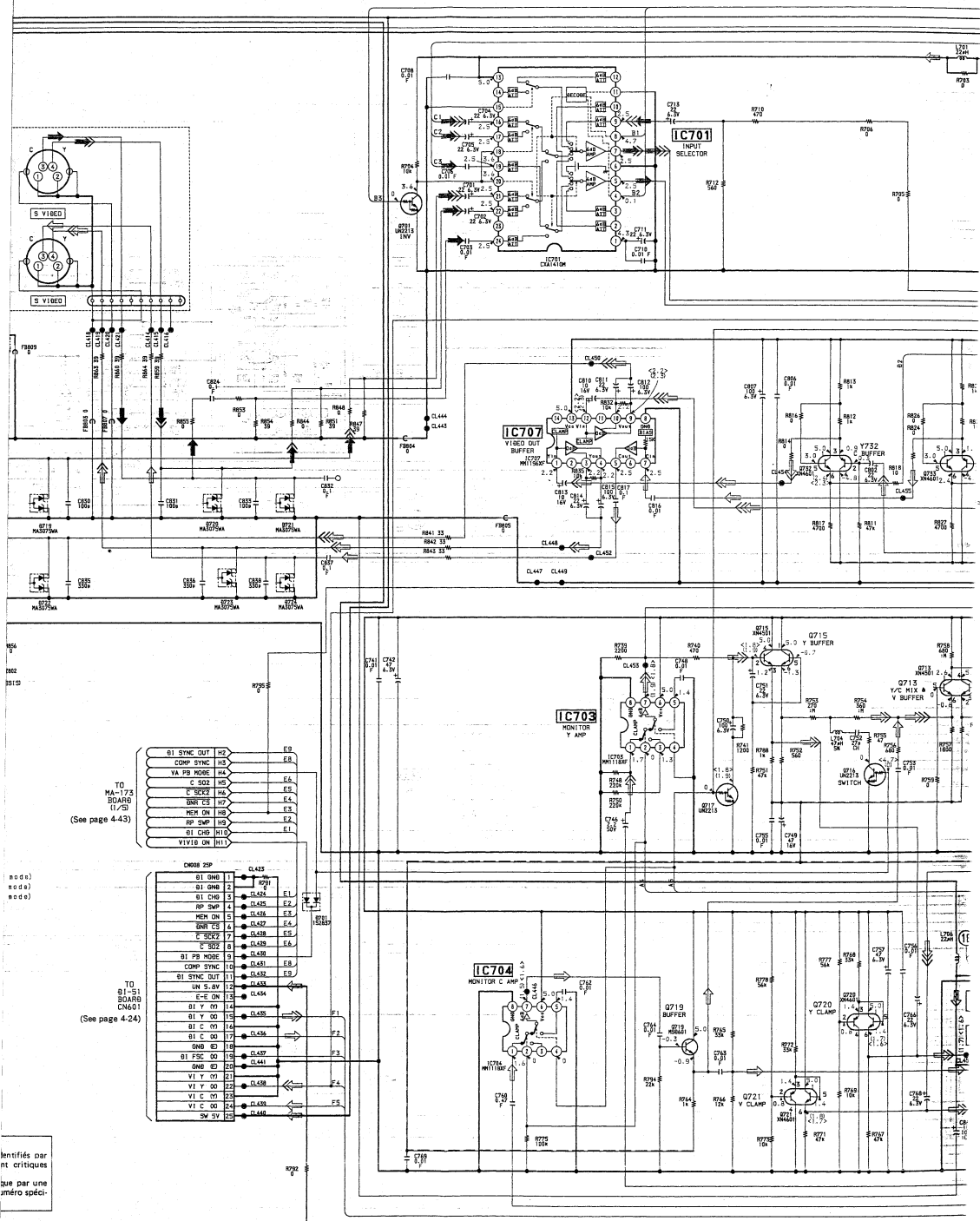
MA-173 BOARD (SERVO/SYSTEM CONTROL BLOCK)



Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.











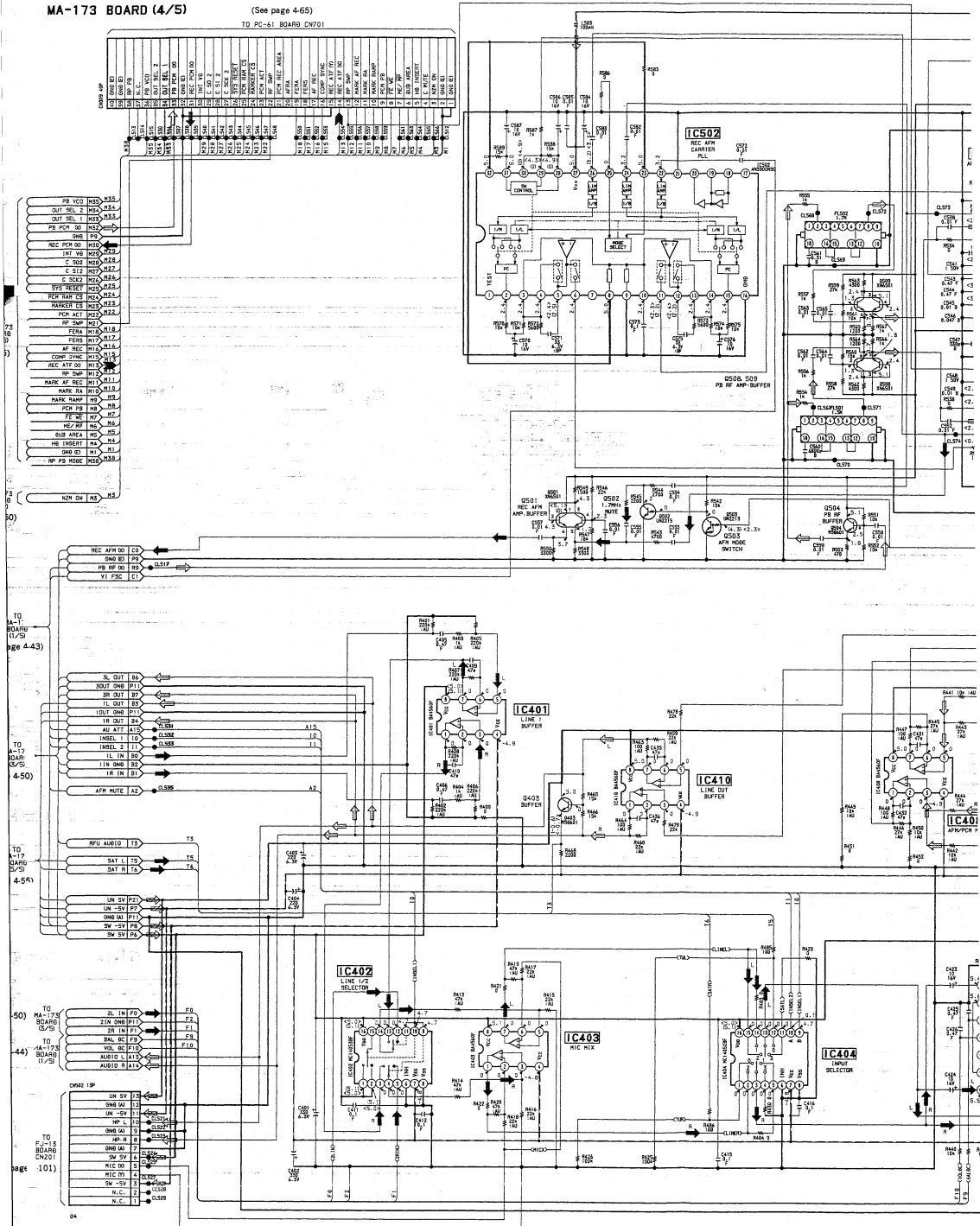
5) 02791

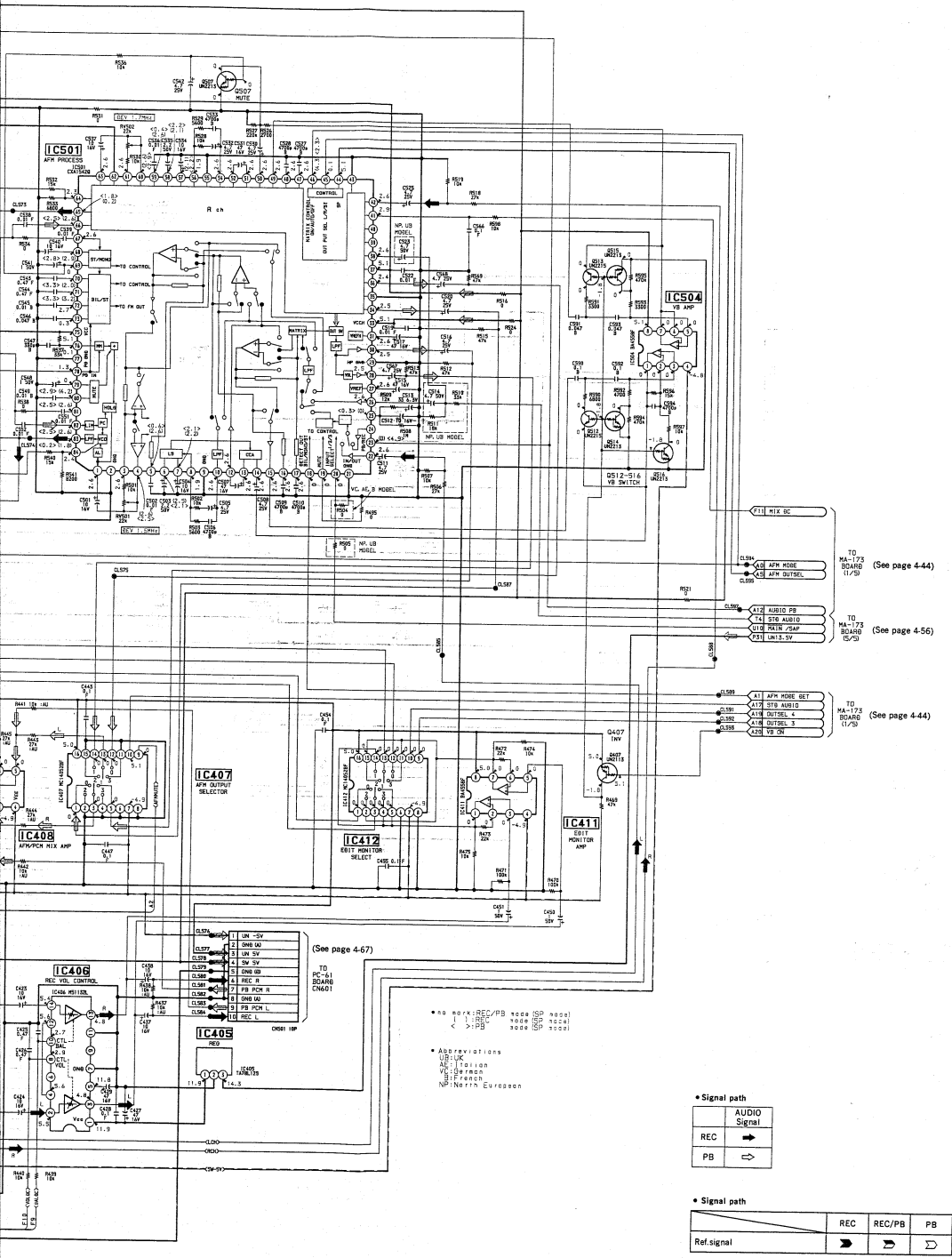
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MA-173 BOARD (4/5)

(See page 4-65)

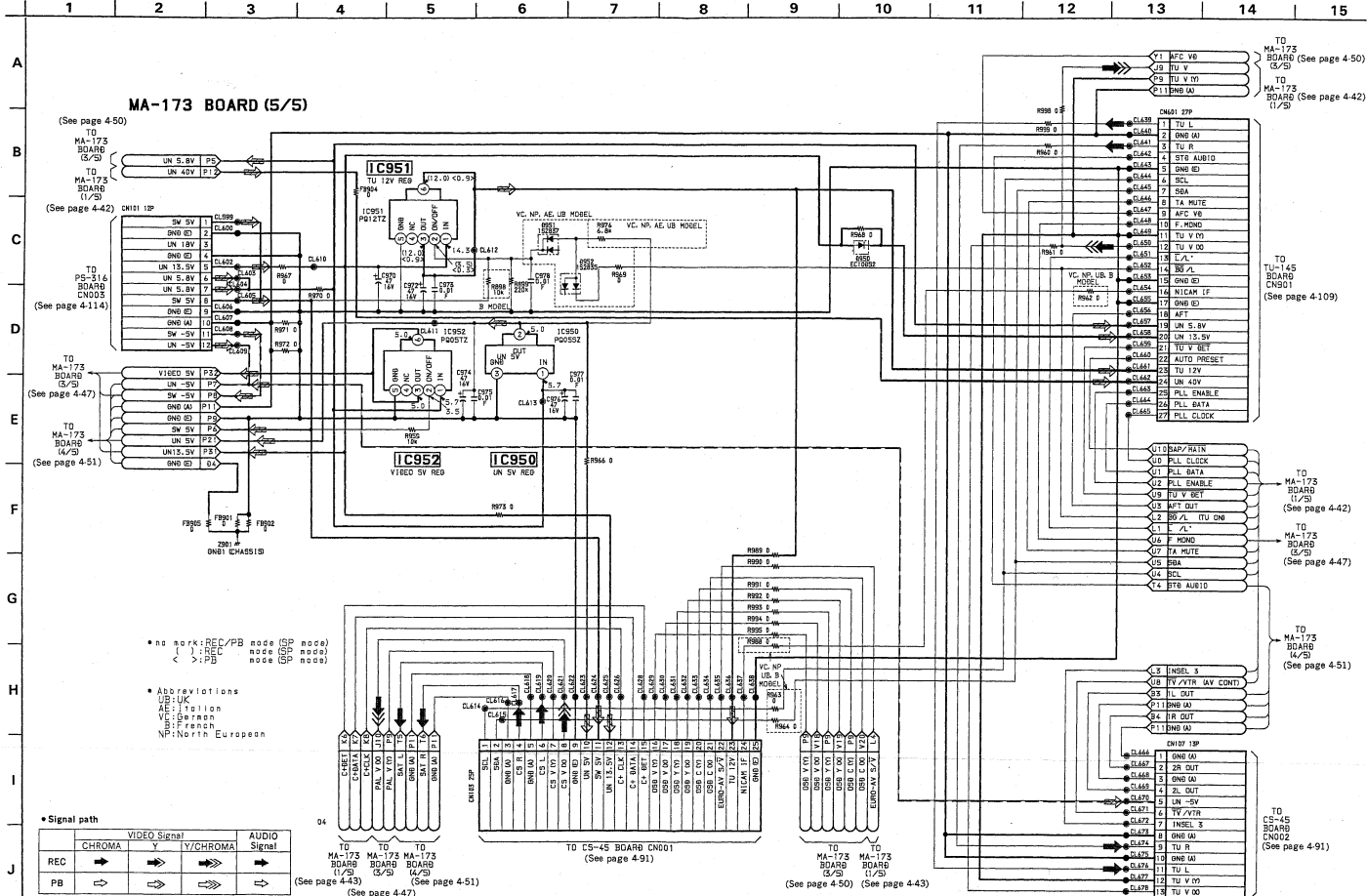
TO PC-41 BOARD CN701





• Refer to page 4-33, 4-37 for Printed Wiring Board.

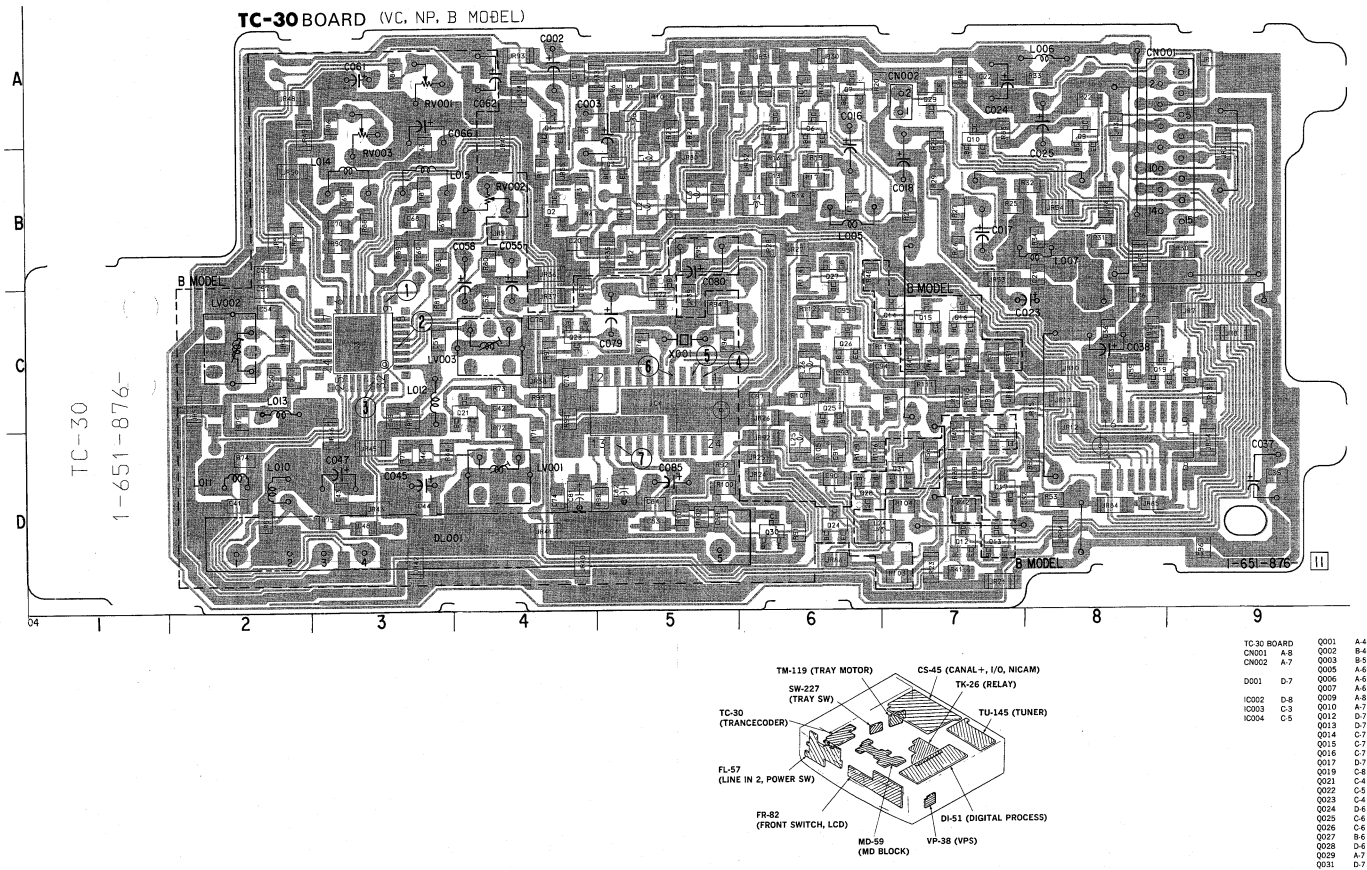
• Refer to page 4-33, 4-37 for Printed Wiring Board.



EV-S9000E AE/B/NP/UB/VC

TC-30 (TRANSCODER PROCESS) PRINTED WIRING BOARD

—Ref. No. TC-30 BOARD: 9000 series—



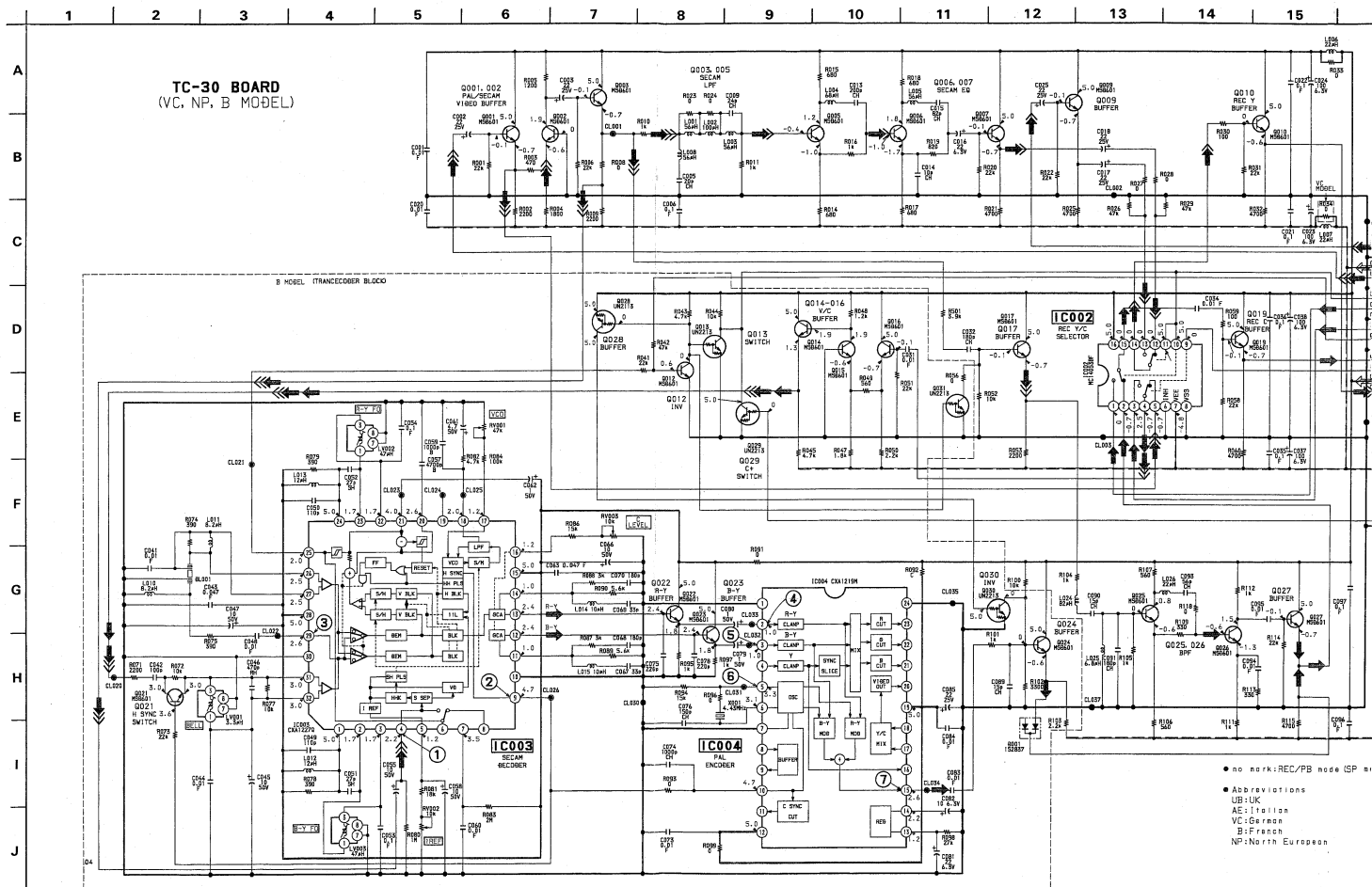
TRANSCODER

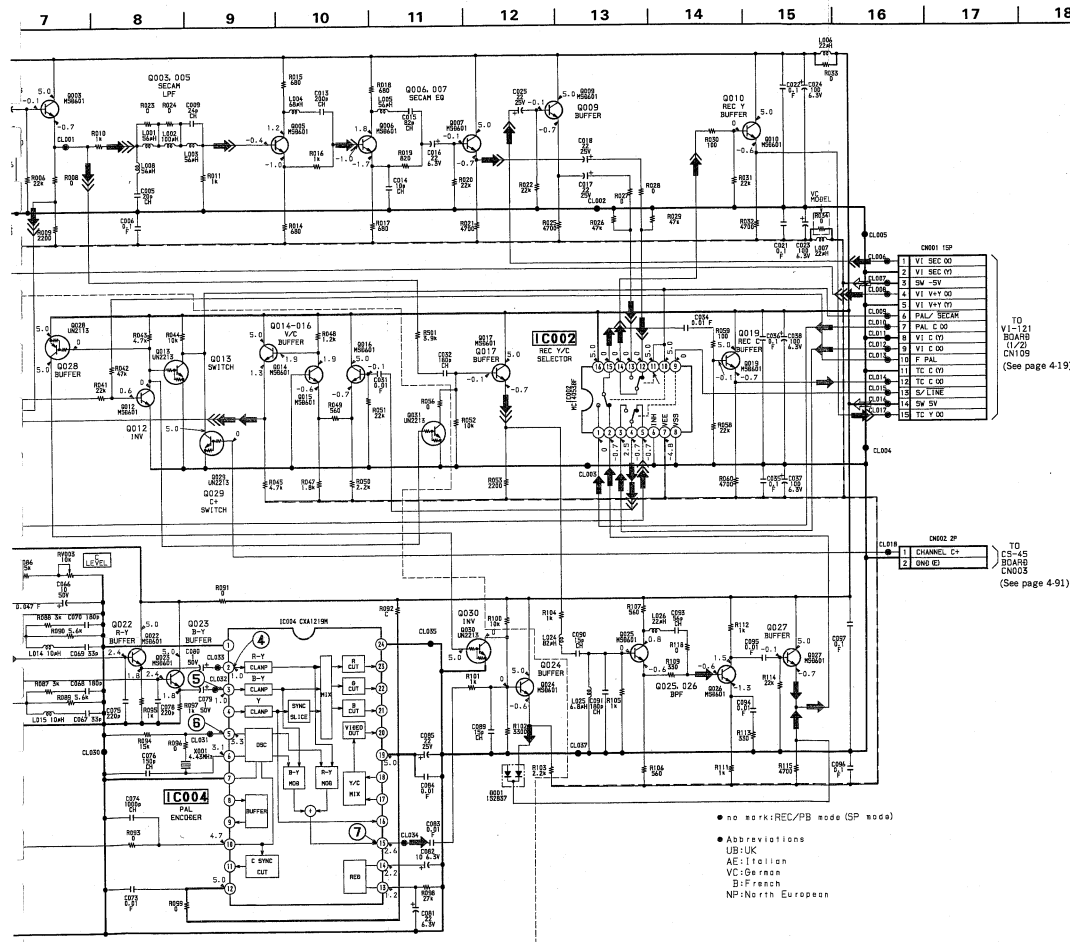
4-57

4-58

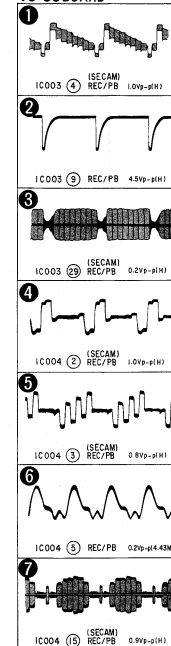
TC-30 (TRANSCODER PROCESS) SCHEMATIC DIAGRAM

—Ref. No. TC-30 BOARD: 9000 series—





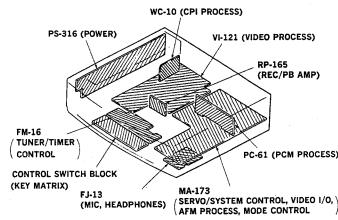
TC-30 BOARD



• Signal path

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	→	→
PB	→	→	→

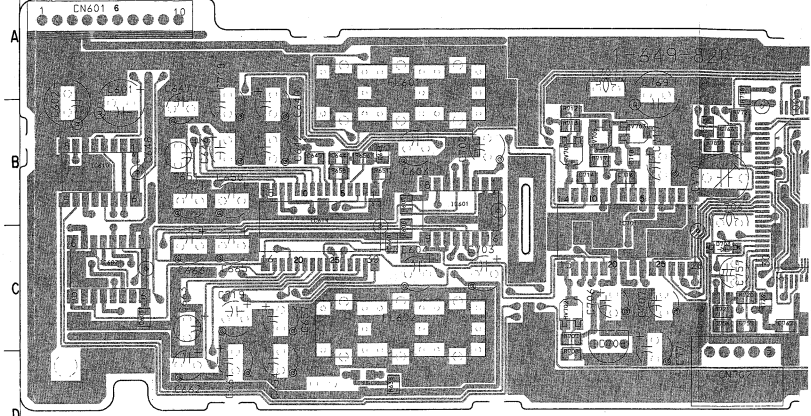
EV-S9000E AE/B/NP/UB/VC



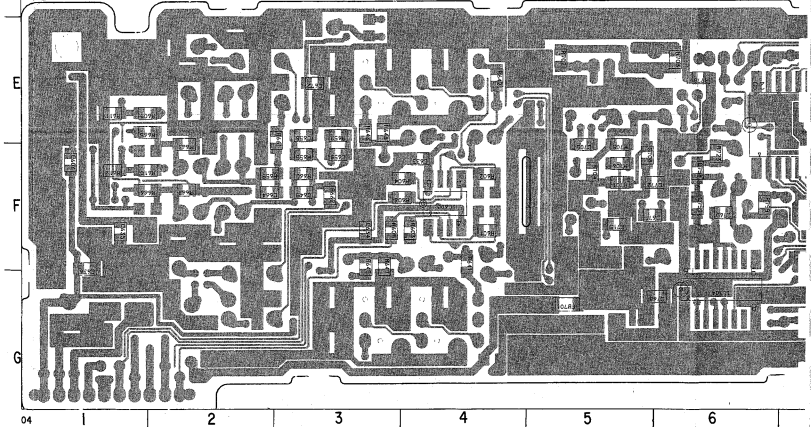
PC-61 (PCM AUDIO PROCESS) PRINTED WIRING BOARD
—Ref. No. PC-61 BOARD: 4000 series—

- PC-61 BOARD
- | | |
|-------|-----|
| CN601 | A1 |
| CN701 | A5 |
| CN702 | D6 |
| CN703 | D10 |
| D702 | B10 |
| D703 | C6 |
| IC601 | B4 |
| IC602 | C1 |
| IC603 | F4 |
| IC610 | B1 |
| IC614 | B3 |
| IC701 | B5 |
| IC703 | B7 |
| IC704 | G6 |
| IC705 | E7 |
| IC707 | C8 |
| IC708 | C10 |
| IC709 | C5 |
| Q703 | B10 |
| Q704 | F8 |
| Q705 | B9 |
| Q706 | B6 |
| Q708 | C10 |
| Q711 | B9 |

PC-61 BOARD (COMPONENT SIDE)

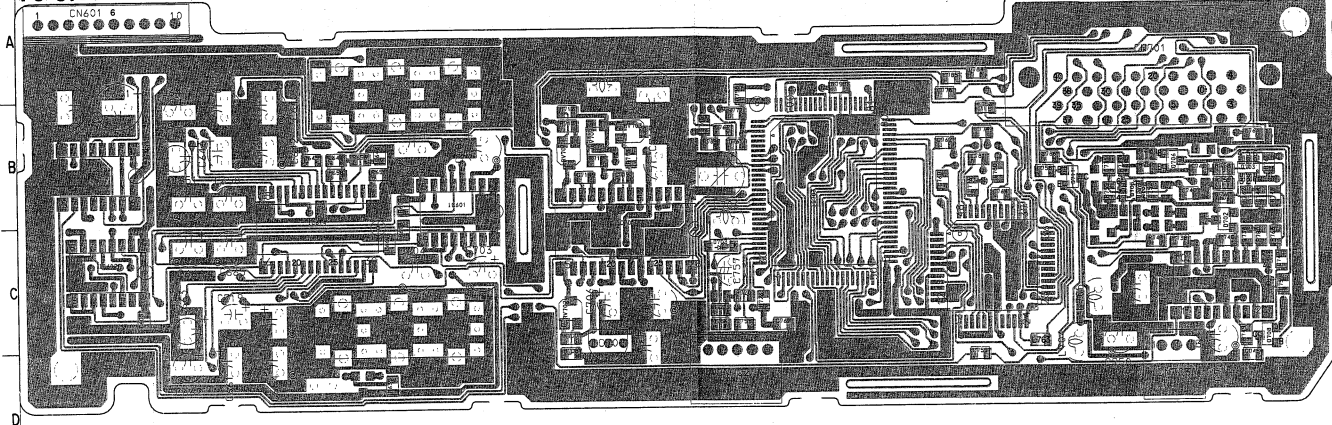


PC-61 BOARD (CONDUCTOR SIDE)

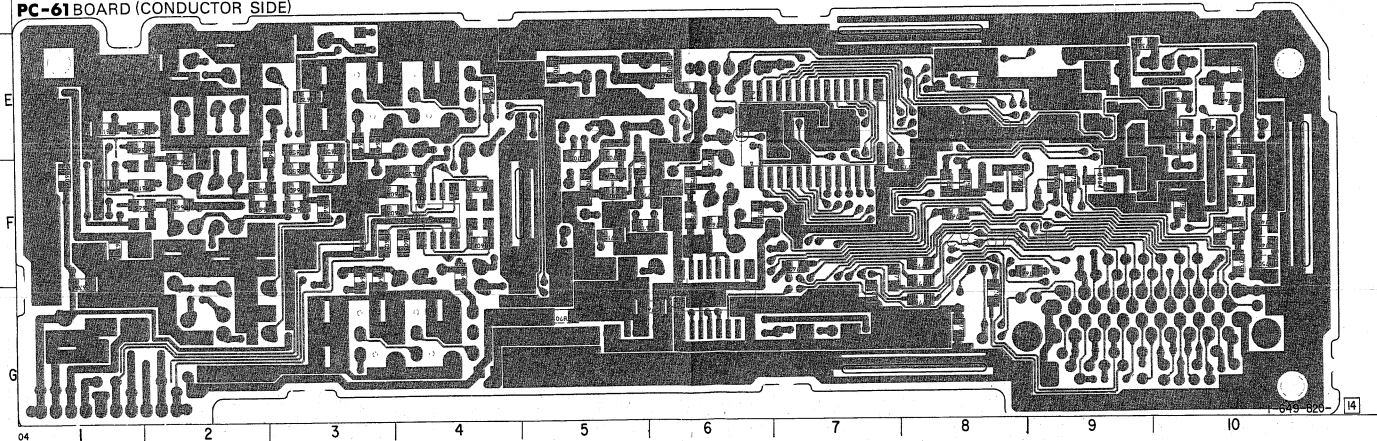


PC-61 (PCM AUDIO PROCESS) PRINTED WIRING BOARD
 —Ref. No. PC-61 BOARD: 4000 series—

PC-61 BOARD (COMPONENT SIDE)



PC-61 BOARD (CONDUCTOR SIDE)



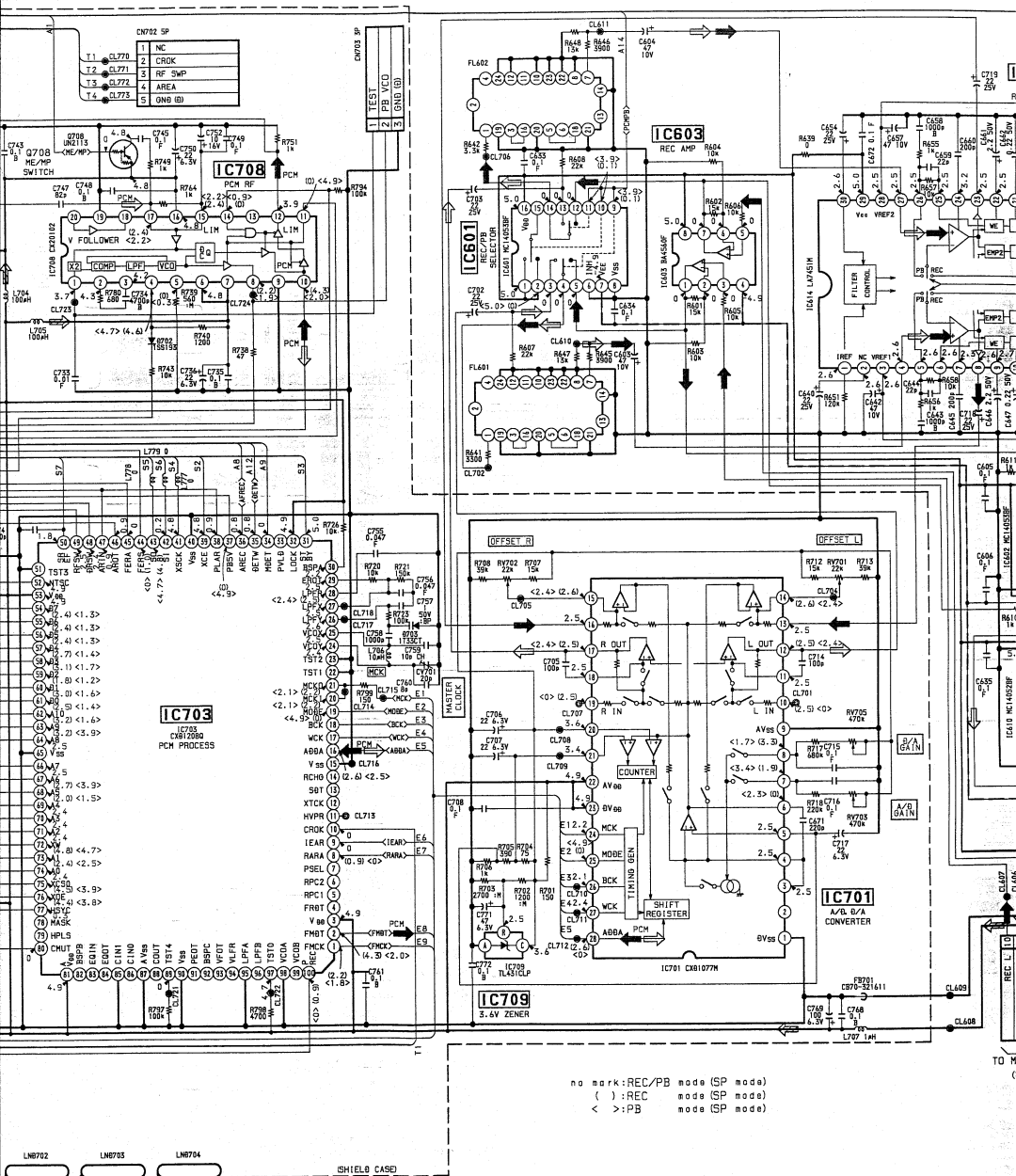
The schematic diagram illustrates a digital circuit with the following components and connections:

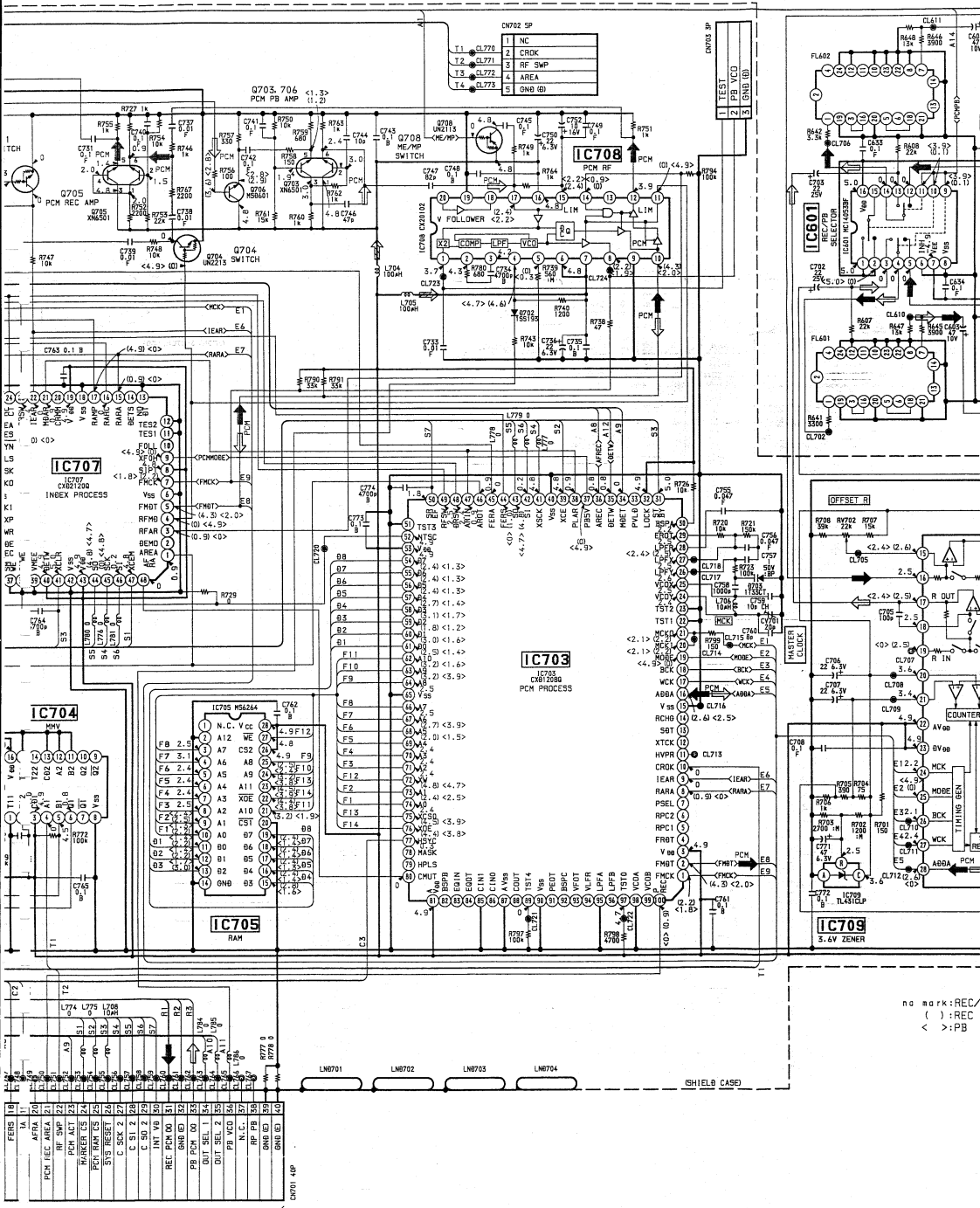
- IC701:** A 74181 4-bit ALU, configured with various inputs and outputs.
- IC702:** A 74181 4-bit ALU, configured with various inputs and outputs.
- IC703:** A 74181 4-bit ALU, configured with various inputs and outputs.
- IC704:** A 74181 4-bit ALU, configured with various inputs and outputs.
- IC705:** A 74181 4-bit ALU, configured with various inputs and outputs.
- IC706:** A 74181 4-bit ALU, configured with various inputs and outputs.
- IC707:** A 74181 4-bit ALU, configured with various inputs and outputs.
- IC708:** A 74181 4-bit ALU, configured with various inputs and outputs.
- IC709:** A 74181 4-bit ALU, configured with various inputs and outputs.

The diagram includes a legend in the top right corner identifying the ICs and their functions:

IC	Function
1	NC
2	CLOCK
3	RF SWP
4	AREA
5	ONE (0)

The diagram is labeled 'D0101 45P' at the bottom left.





no mark: REC/
() : REC
< > : PB



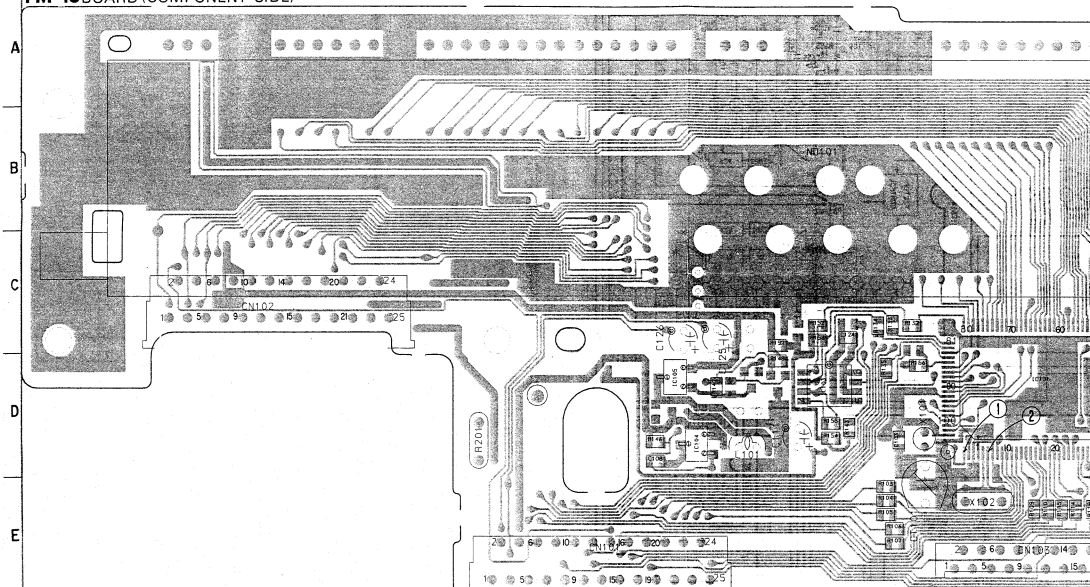
TO MA-173 BOARD (4/5) CN501
(See page 4-53)

	AUDIO Signal
REC	➡
PB	↔

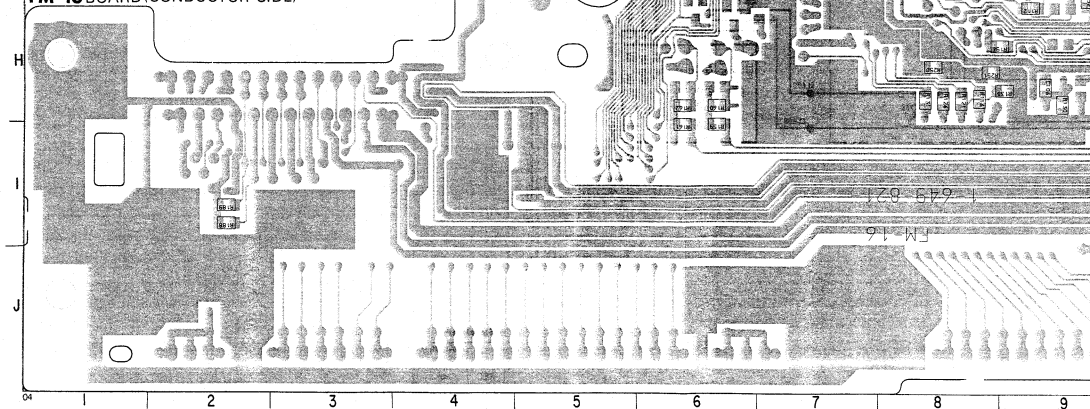
FM-16 (TUNER/TIMER CONTROL), TK-26 (RELAY), SW-227 (TRAY SWITCH),
TM-119 (TRAY MOTOR) PRINTED WIRING BOARDS

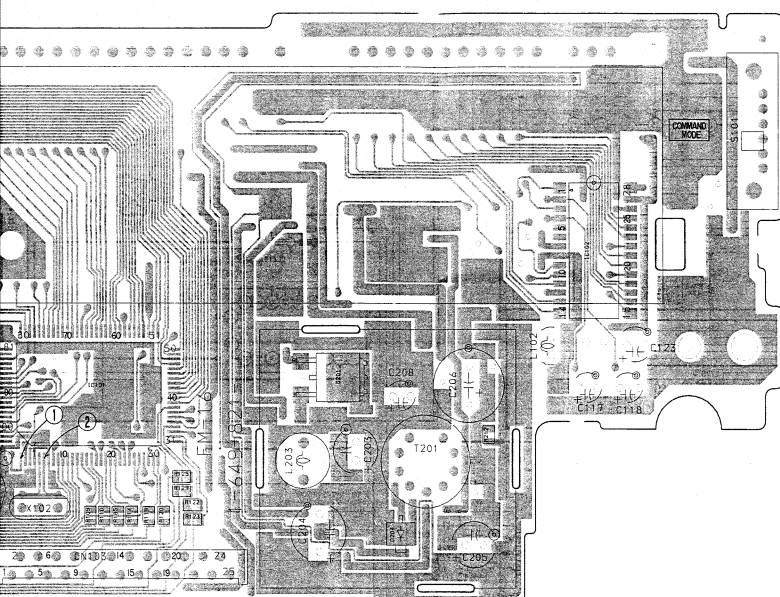
—Ref. No. FM-16, TK-26, SW-227 and TM-119 BOARD: 7000 series—

FM-16 BOARD (COMPONENT SIDE)



FM-16 BOARD (CONDUCTOR SIDE)





- FM-16 BOARD
CN101 E-5
CN102 C-2
CN103 E-9

- | | |
|------|------|
| D201 | G-12 |
| D202 | H-12 |
| D203 | H-12 |
| D204 | F-11 |

- | | |
|-------|------|
| IC101 | D-9 |
| IC102 | C-13 |
| IC103 | D-7 |
| IC104 | D-6 |
| IC105 | D-6 |
| IC201 | H-11 |

- | | |
|------|------|
| Q102 | F-12 |
| Q103 | F-12 |
| Q201 | D-11 |

- | | |
|-------------|-----|
| TK-26 BOARD | |
| CN501 | E-2 |
| CN502 | E-1 |
| CN503 | A-4 |
| CN504 | A-2 |
| CN507 | C-4 |
| CN508 | C-4 |

- | | |
|-------|-----|
| UN508 | C-4 |
| D503 | C-1 |
| UN501 | C-1 |

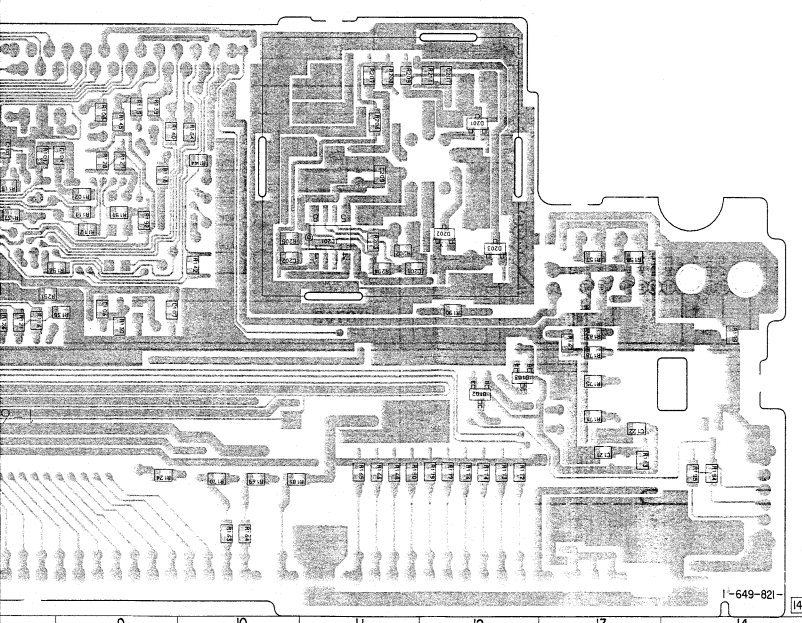
© 2006 The Authors
Journal compilation © 2006 Blackwell Publishing Ltd

M-119 (TRAY

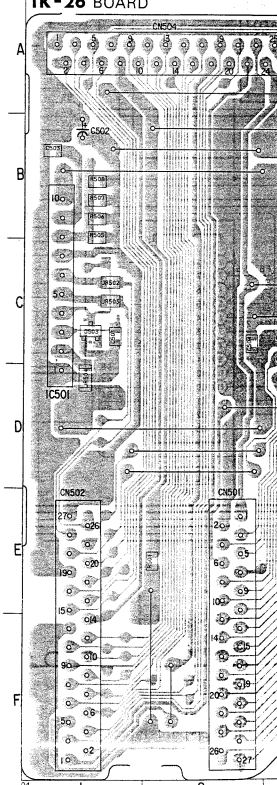
TC-30
(TRANSCODER)

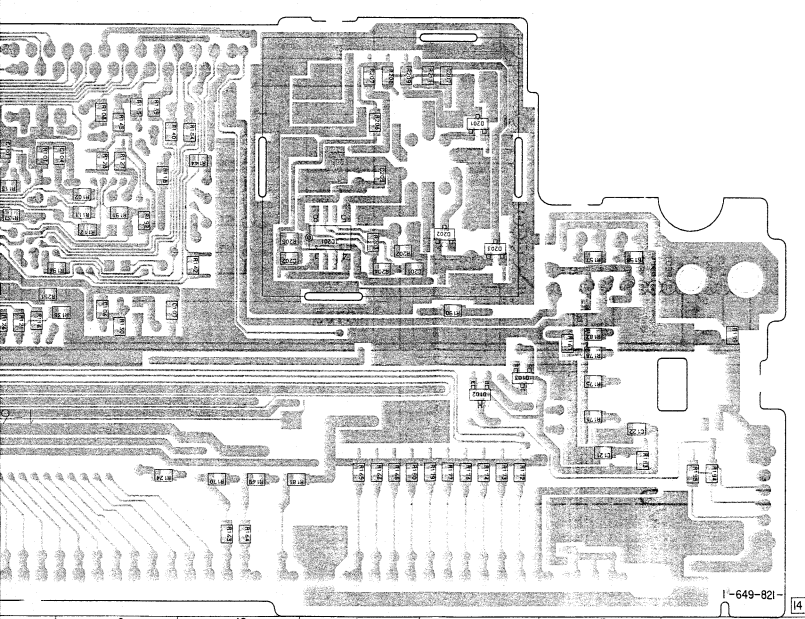
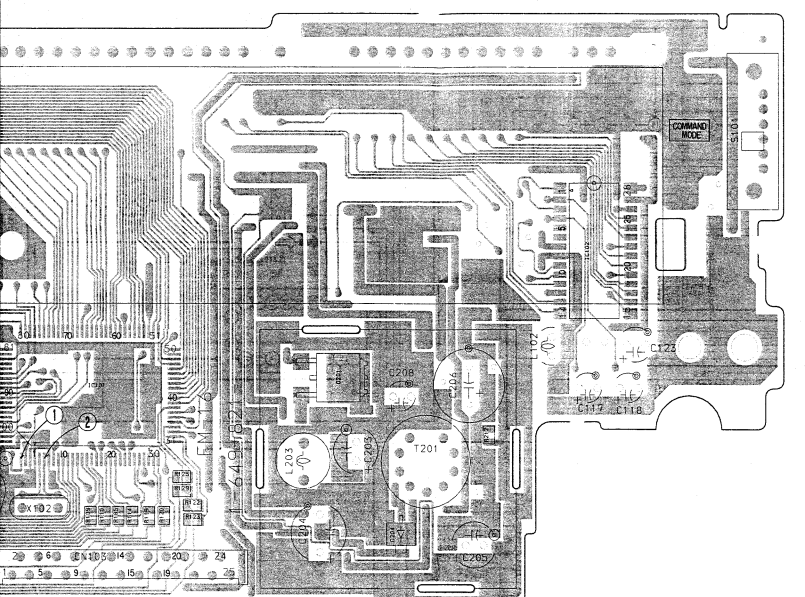
FL-57
(LINE IN 2 POWER SW)

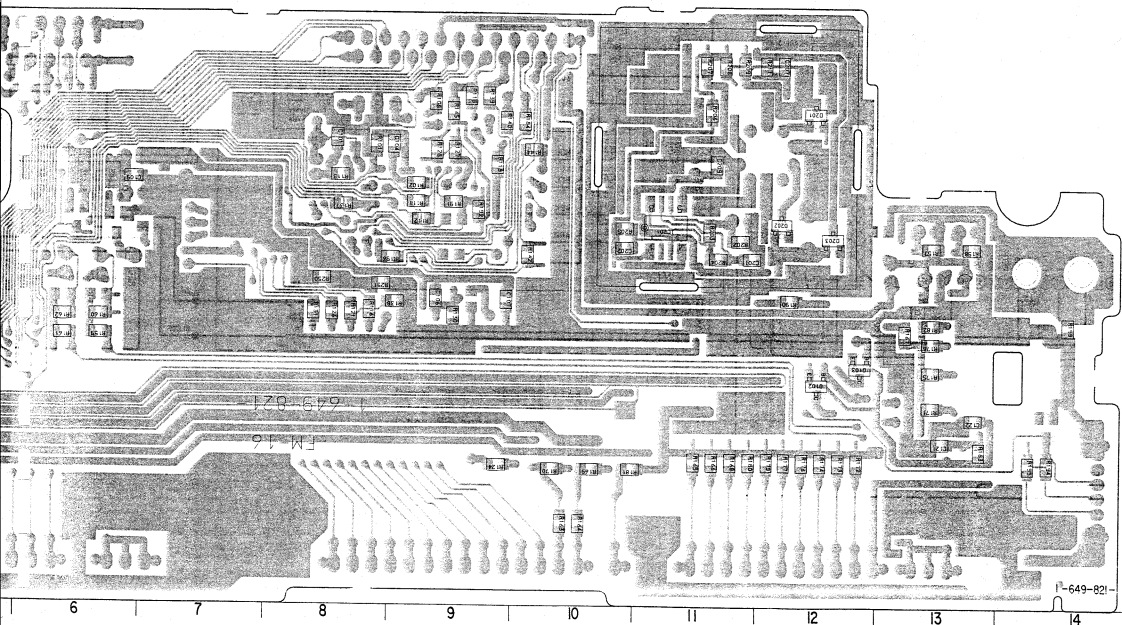
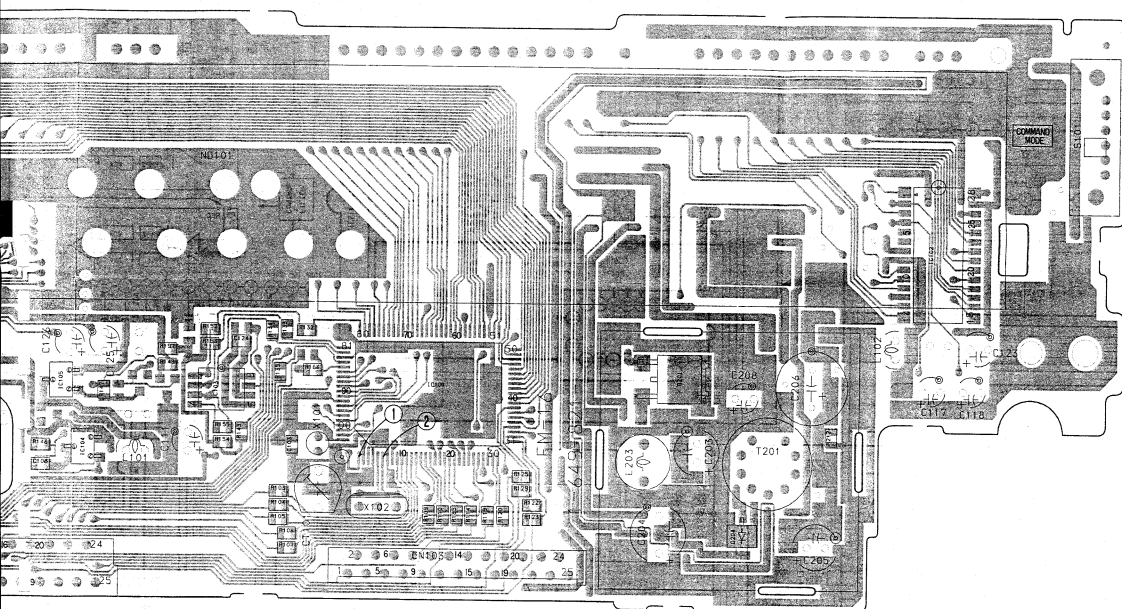
FR-82 FRONT SWITCH L.C.



TK-26 BOARD





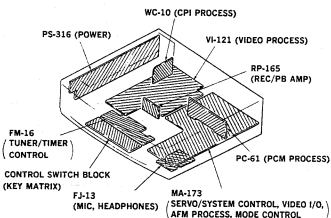
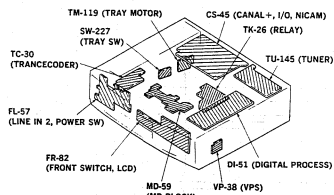


FM16 BOARD
CN101 E-5
CN102 C-2
CN103 E-9

D201 G-12
D202 H-12
D303 H-12
D204 E-11

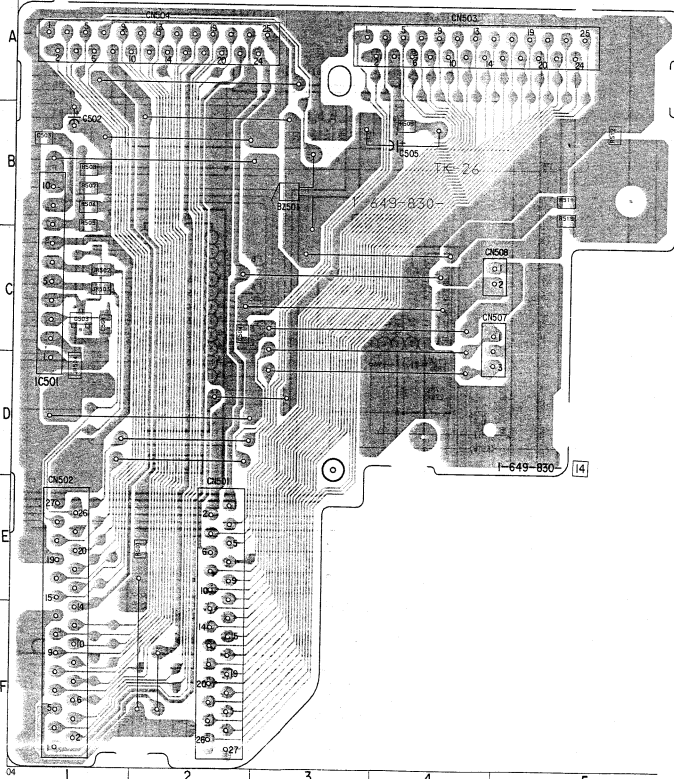
IC101 D-9
IC102 C-13
IC103 D-7
IC104 D-6
IC105 D-6
IC201 H-11

Q102 I-12
Q103 I-12
Q201 D-11

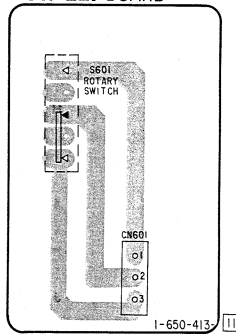


TK-26 BOARD
CN501 E-2
CN502 E-1
CN503 A-4
CN504 A-2
CN507 C-4
CN508 C-4
D503 C-1
IC501 C-1

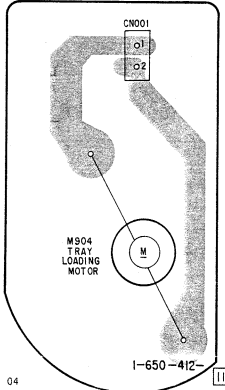
TK-26 BOARD



SW-227 BOARD

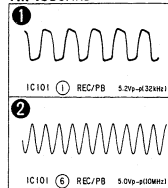


TM-119 BOARD

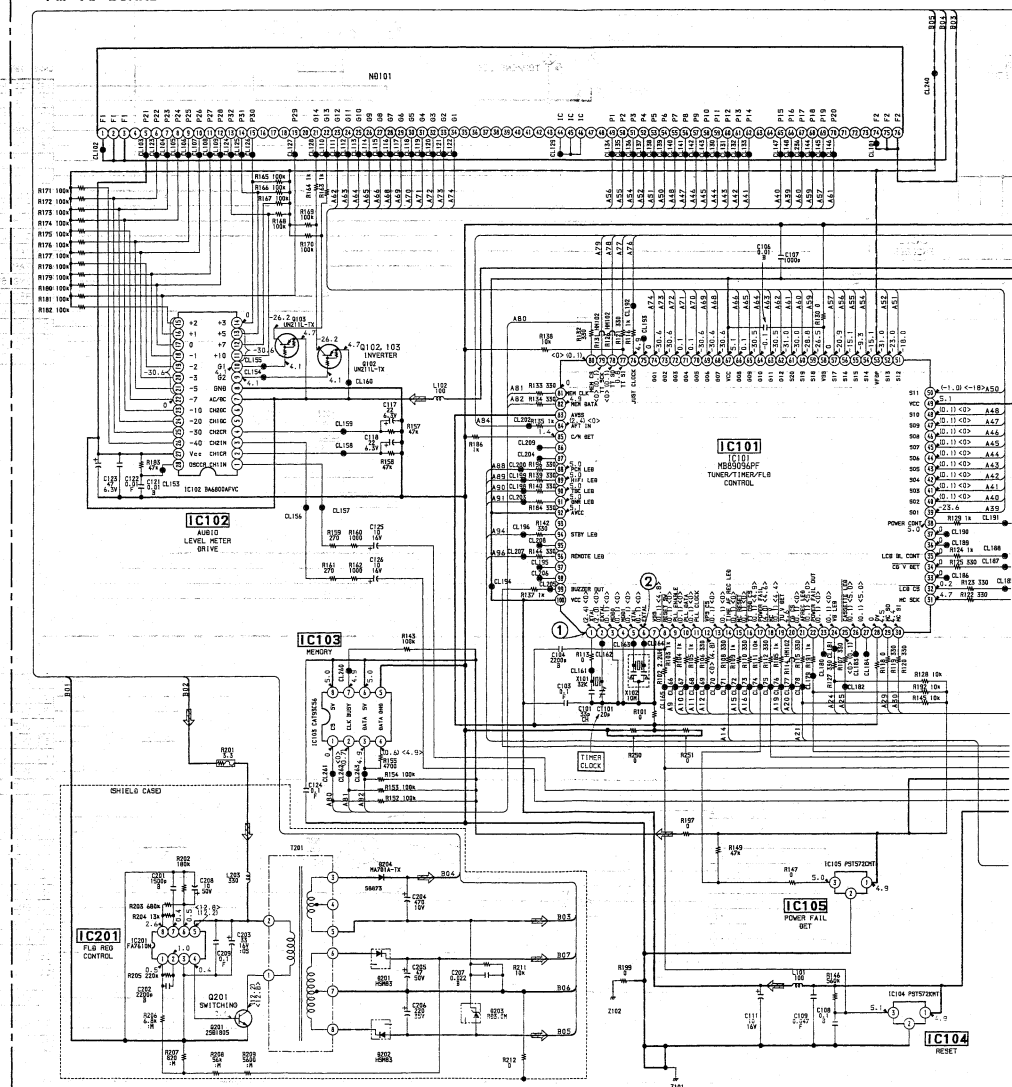


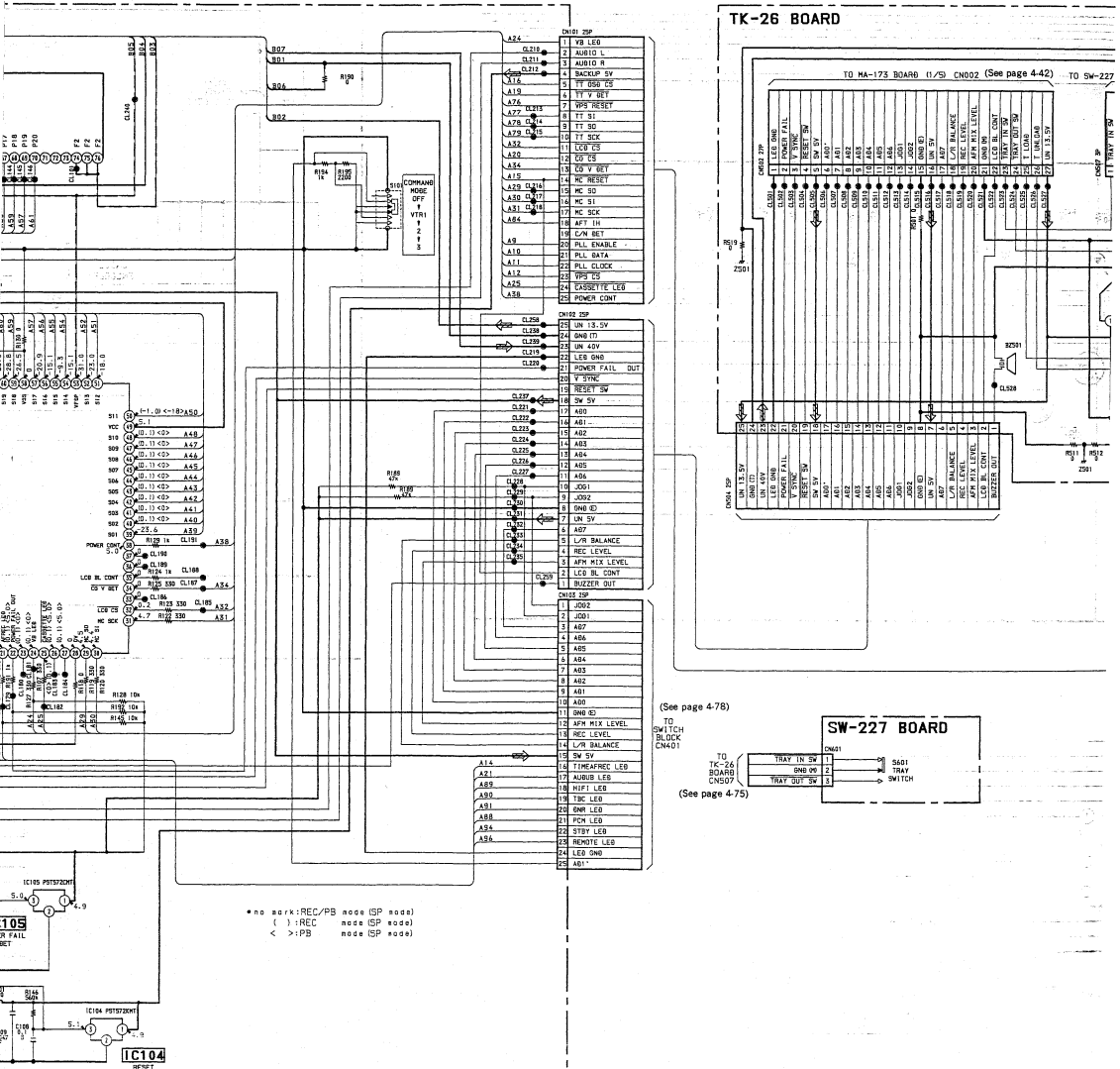
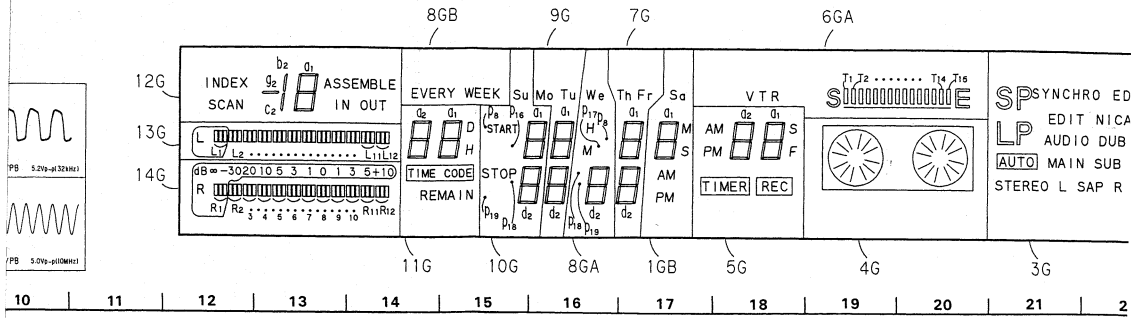
FM-16 (TUNER/TIMER CONTROL), TK-26 (RELAY), SW-227 (TRAY SWITCH),
 TM-119 (TRAY MOTOR) SCHEMATIC DIAGRAMS
 —Ref. No. FM-16, TK-26, SW-227 and TM-119 BOARD: 7000 series—

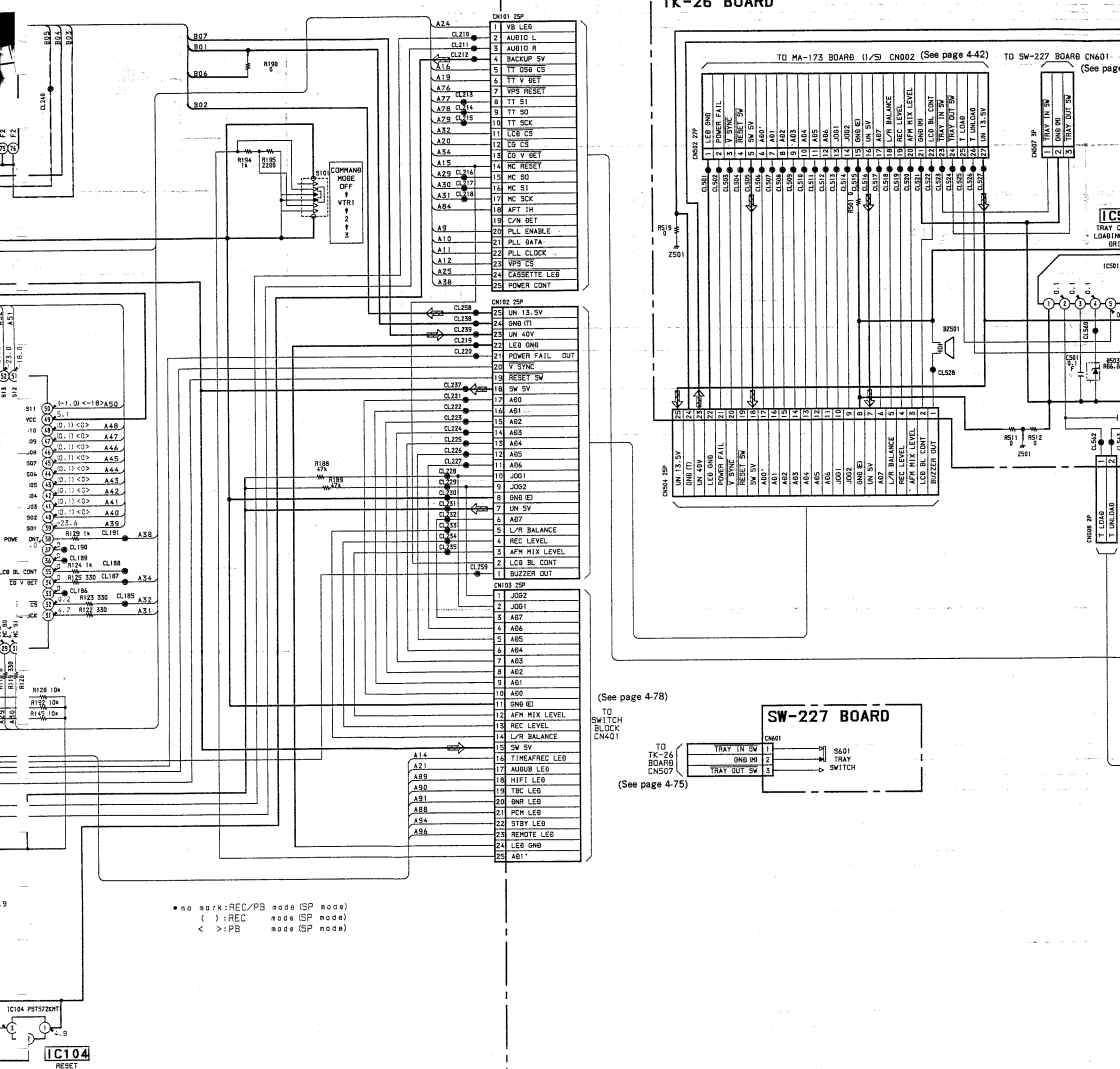
FM-16 BOARD

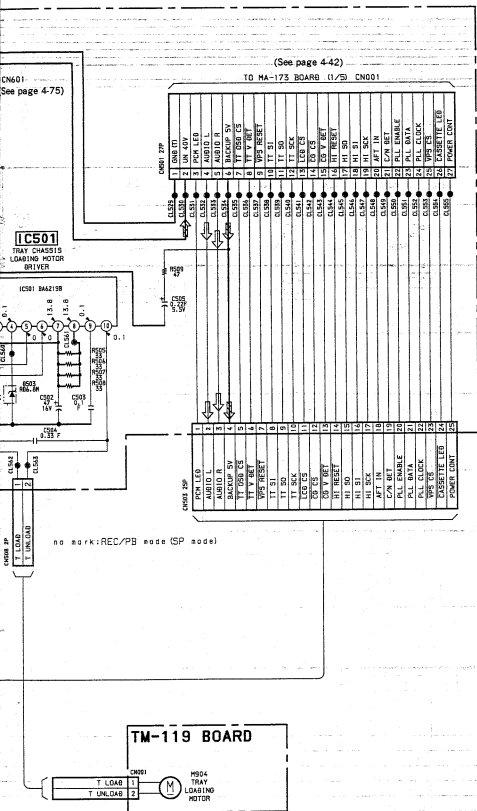
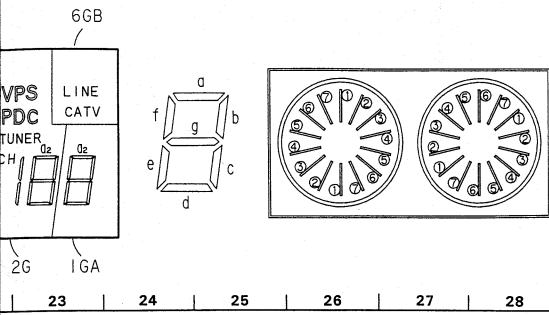


FM-16 BOARD









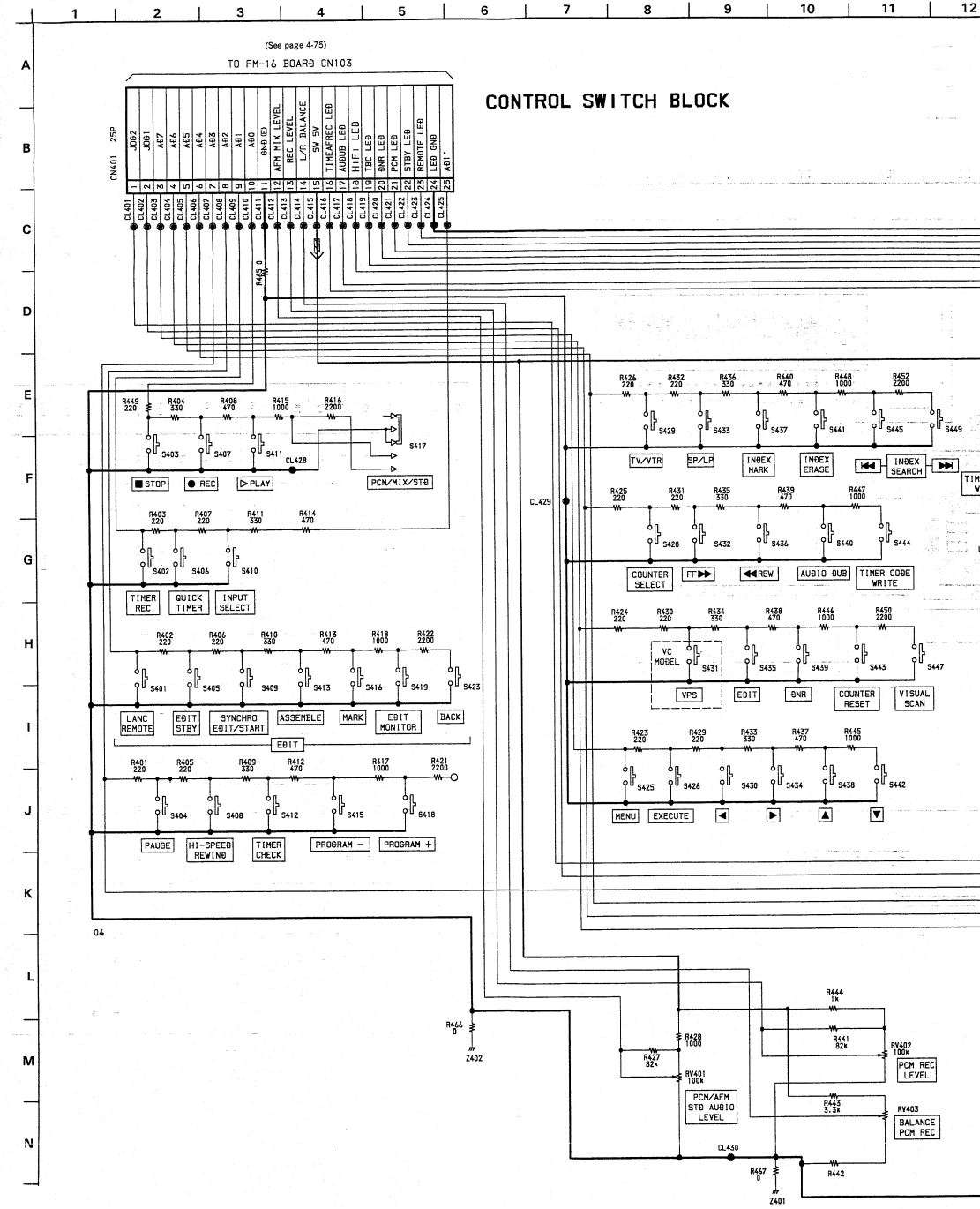
	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G
P1	a1	VPS	SYNCHRO EDIT	—	a1	T1	a1	—	a1	a1	a1	a1
P2	b1	—	SP	—	b1	T2	b1	—	b1	b1	b1	b1
P3	f1	—	EDIT	—	f1	T3	f1	—	f1	f1	f1	f1
P4	g1	—	AUDIO DUB	—	g1	T4	g1	—	g1	g1	g1	g1
P5	c1	—	—	—	c1	T5	c1	—	c1	c1	c1	c1
P6	PDC	PDC	NICAM	—	e1	T6	e1	—	e1	e1	e1	e1
P7	TUNER	TUNER	—	—	d1	T7	d1	—	d1	d1	d1	d1
P8	AM	—	—	—	AM	T8	AM	—	—	—	—	—
P9	a2	a2	SUB	⑥	a2	S	a2	a2	a2	a2	a2	a2
P10	b2	b2	—	⑥	b2	T9	b2	b2	b2	b2	b2	b2
P11	f2	f2	—	—	f2	T10	f2	f2	f2	f2	f2	f2
P12	g2	g2	SAP	⑥	g2	T11	g2	g2	g2	g2	g2	g2
P13	c2	c2	R	⑥	c2	T12	c2	c2	c2	c2	c2	c2
P14	e2	e2	MAIN	①	e2	T13	e2	e2	e2	e2	e2	e2
P15	d2	d2	AUTO	①	d2	T14	d2	d2	d2	d2	d2	d2
P16	f	f	—	①	f	T15	f	f	f	f	f	f
P17	CH	CH	LP	—	F	VTR	—	—	—	—	—	—
P18	S	—	L	—	TIME	CATV	—	—	—	—	—	—
P19	Sa	—	STEREO	—	REC	LINE	—	—	—	—	—	—

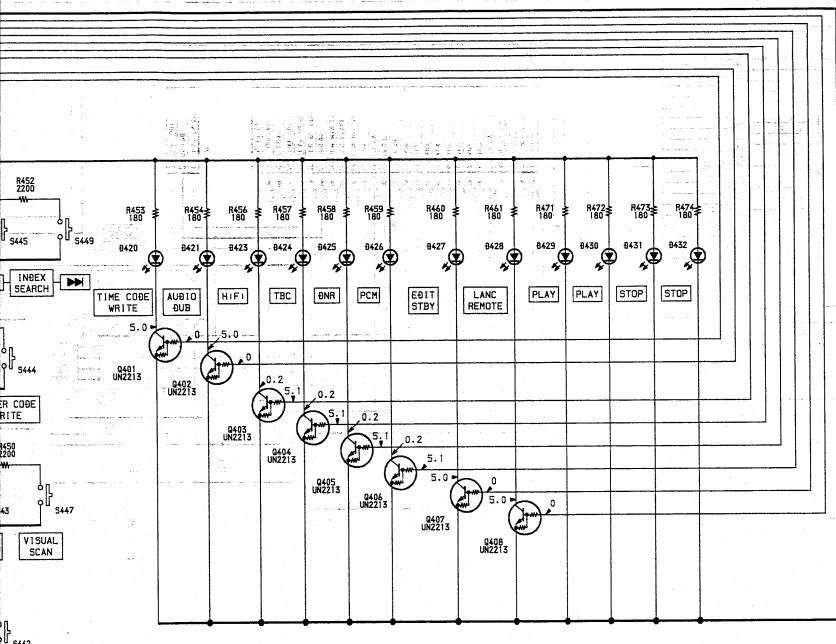
INTERNAL CONNECTION

14G	15G
R1	L1
R2	L2
R3	L3
R4	L4
R5	L5
R6	L6
R7	L7
R8	L8
R9	L9
R10	L10
R11	L11
R12	L12



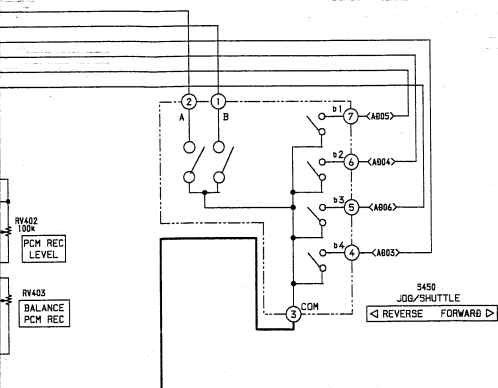
CONTROL SWITCH BLOCK (SWITCH MATRIX), MD-59 (MD BLOCK) SCHEMATIC DIAGRAMS
—Ref. No. CONTROL SWITCH BLOCK: 7000 series, MD-59 BOARD: 4000 series—



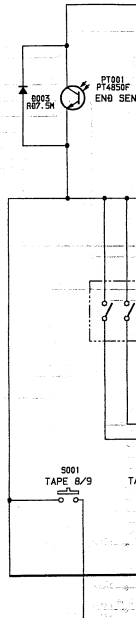


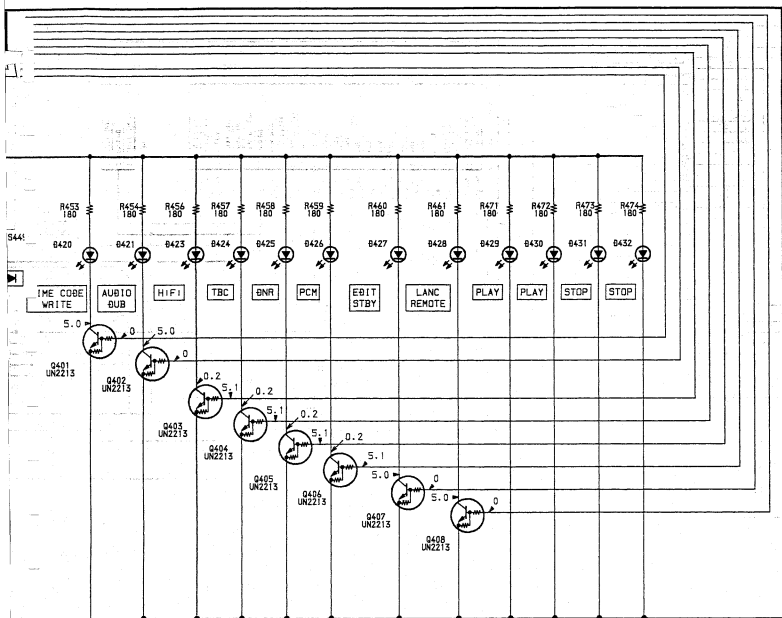
● no mark: REC/PB mode (SP mode)
 () : REC mode (SP mode)
 < > : PB mode (SP mode)

● Abbreviations
 UB: UK
 AE: Italian
 VC: German
 B: French
 NP: North European

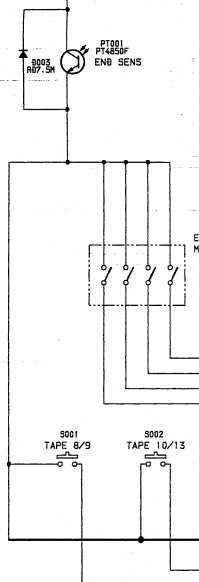


MD-59 BOARD



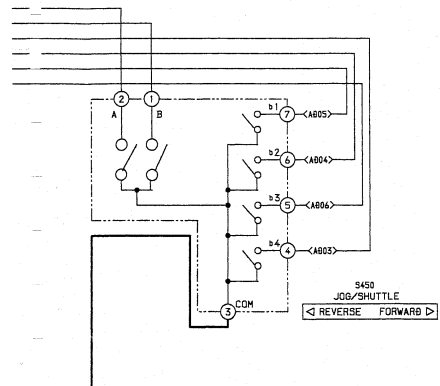


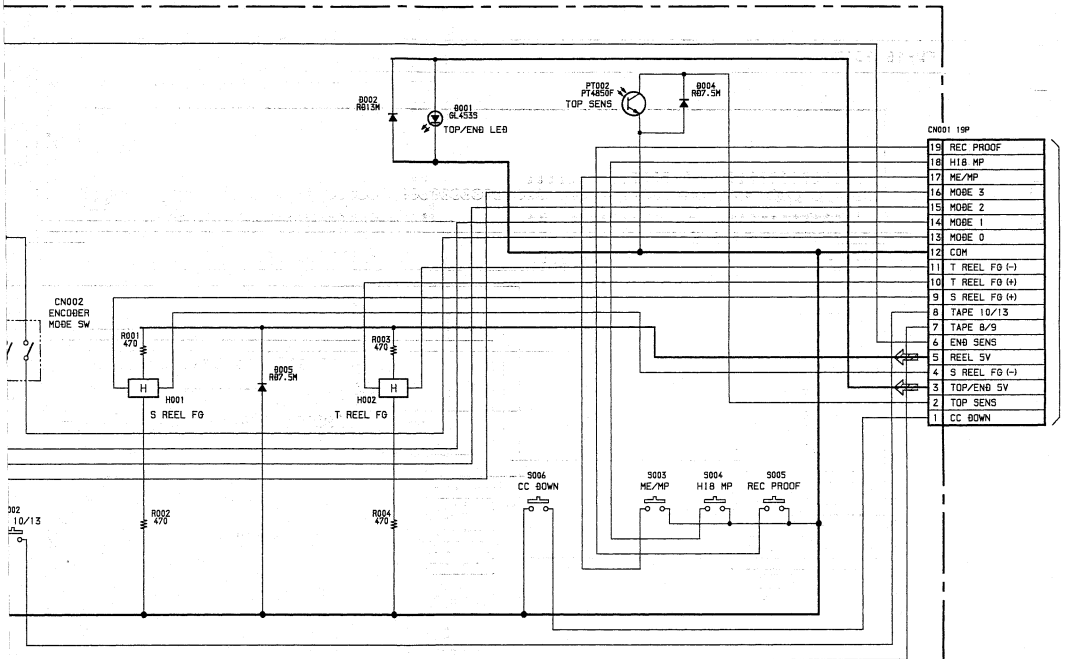
MD-59 BOARD



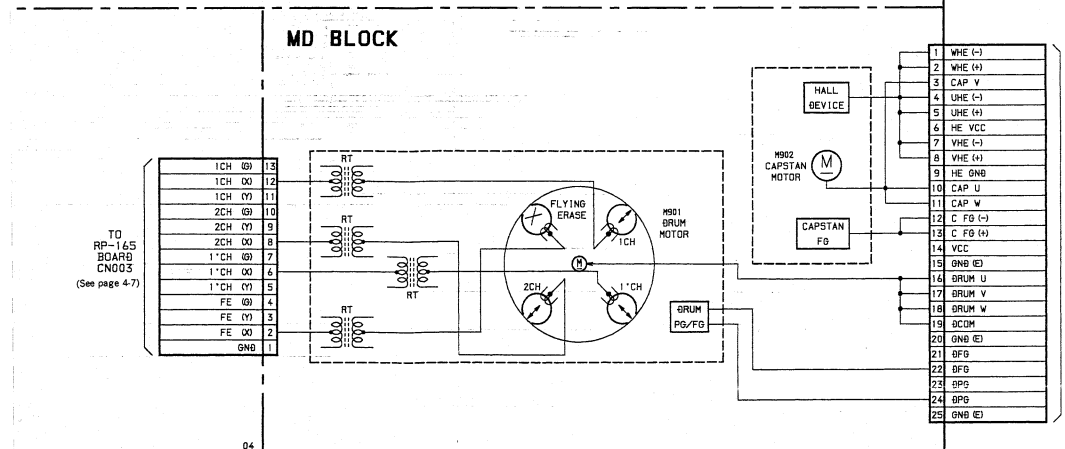
• no mark: REC/PB mode (SP mode)
() : REC mode (SP mode)
< > : PB mode (SP mode)

• Abbreviations
UB: UK
AE: Italian
VC: German
B: French
NP: North European





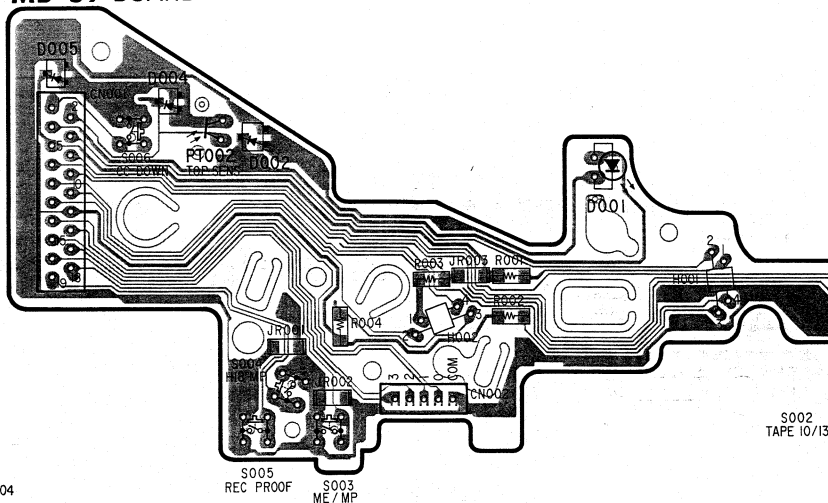
TO
MA-173
BOARD
(1/5)
CN011
(See page
4-45)



TO
MA-173
BOARD
(2/5)
CN502
(See page
4-46)

CONTROL SWITCH BLOCK (SWITCH MATRIX), MD-59 (MD BLOCK) PRINTED WIRING BOARDS
 —Ref. No. CONTROL SWITCH BLOCK: 7000 series, MD-59 BOARD: 4000 series—

MD-59 BOARD



CONTROL SWITCH BLOCK
 CN401 A-6

D420 C-7
 D421 C-5
 D423 A-13
 D424 A-13
 D425 C-1
 D426 A-14
 D427 D-12
 D428 C-12
 D429 D-5
 D430 D-6
 D431 D-4
 D432 D-4

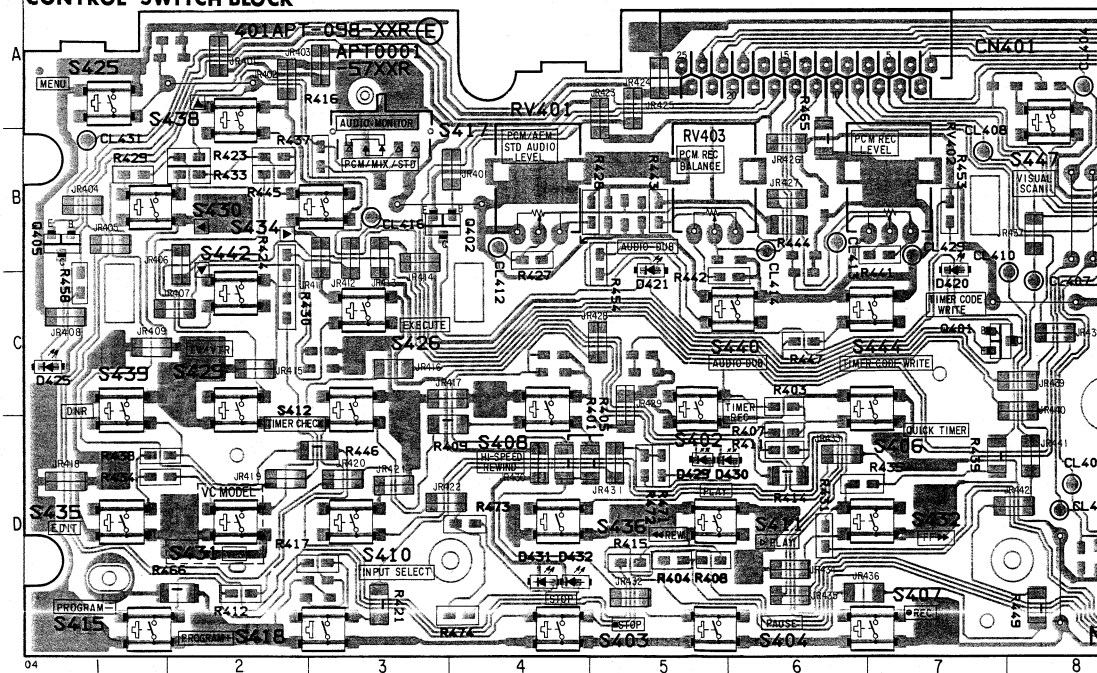
Q401 C-7
 Q402 B-3
 Q403 B-13
 Q404 B-12
 Q405 B-1
 Q406 B-13
 Q407 C-11
 Q408 C-11

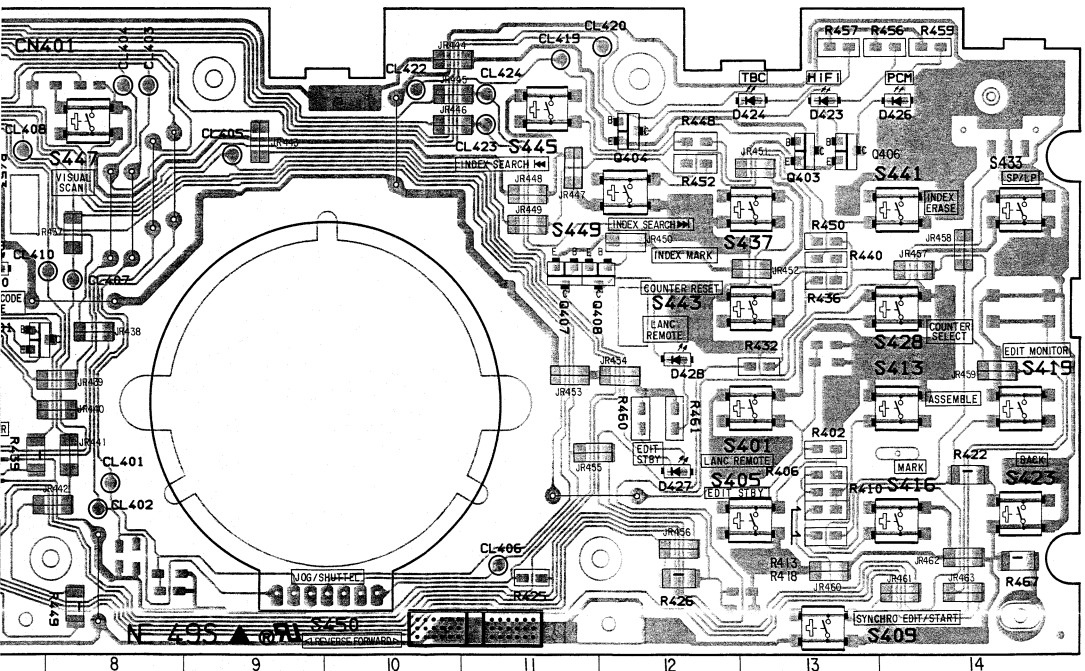
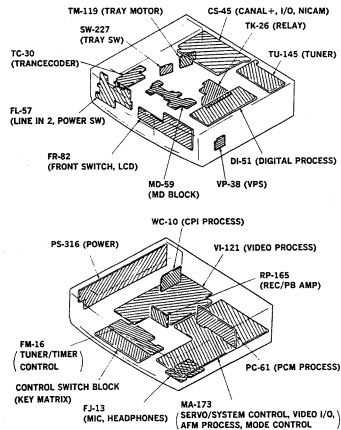
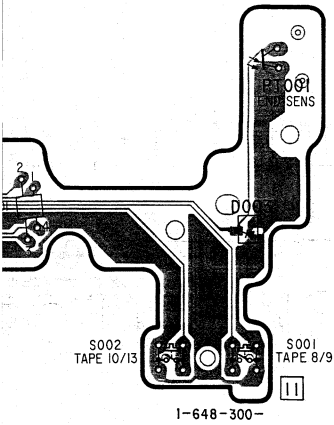
04

S005 REC PROOF
 S003 ME / MP

S002
 TAPE 10/13

CONTROL SWITCH BLOCK

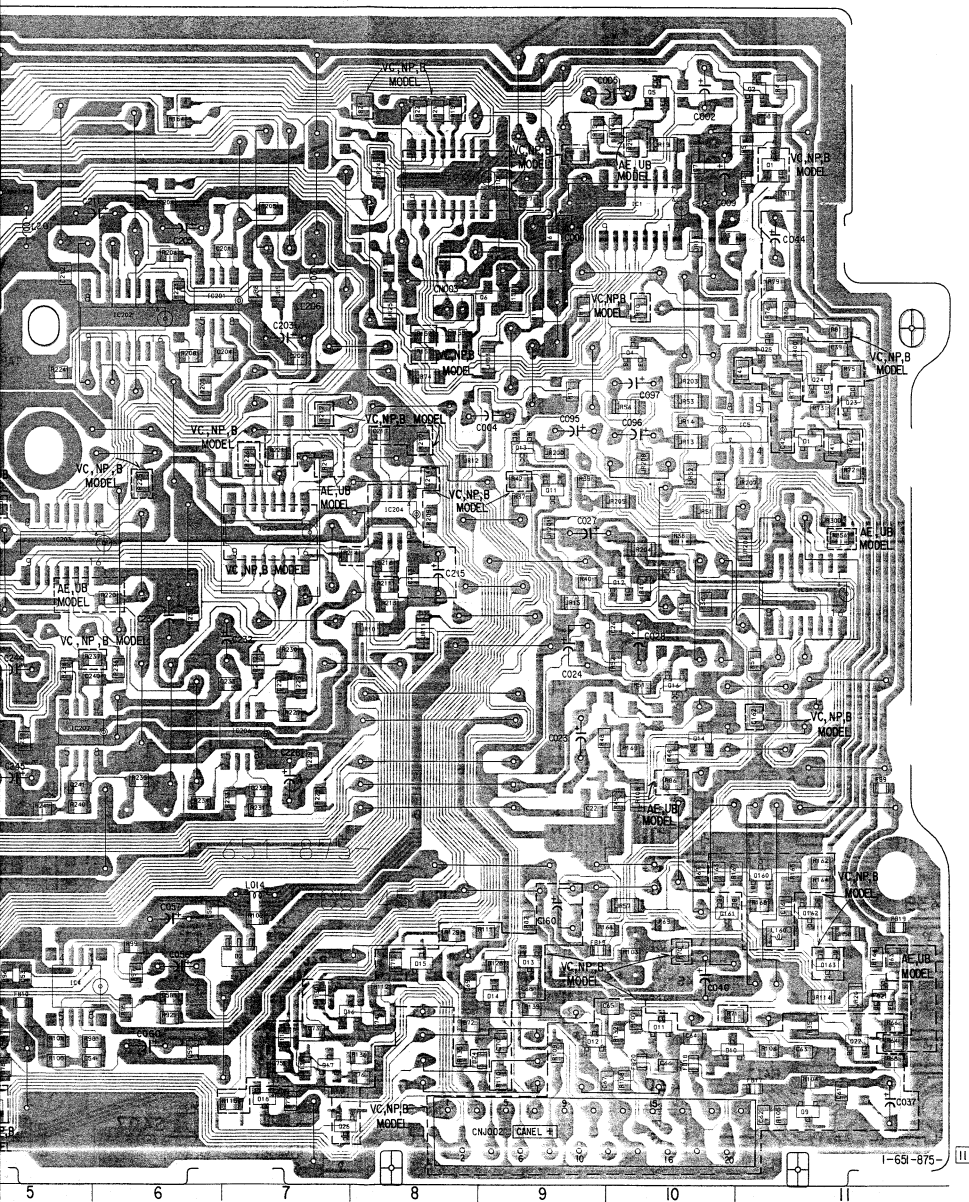




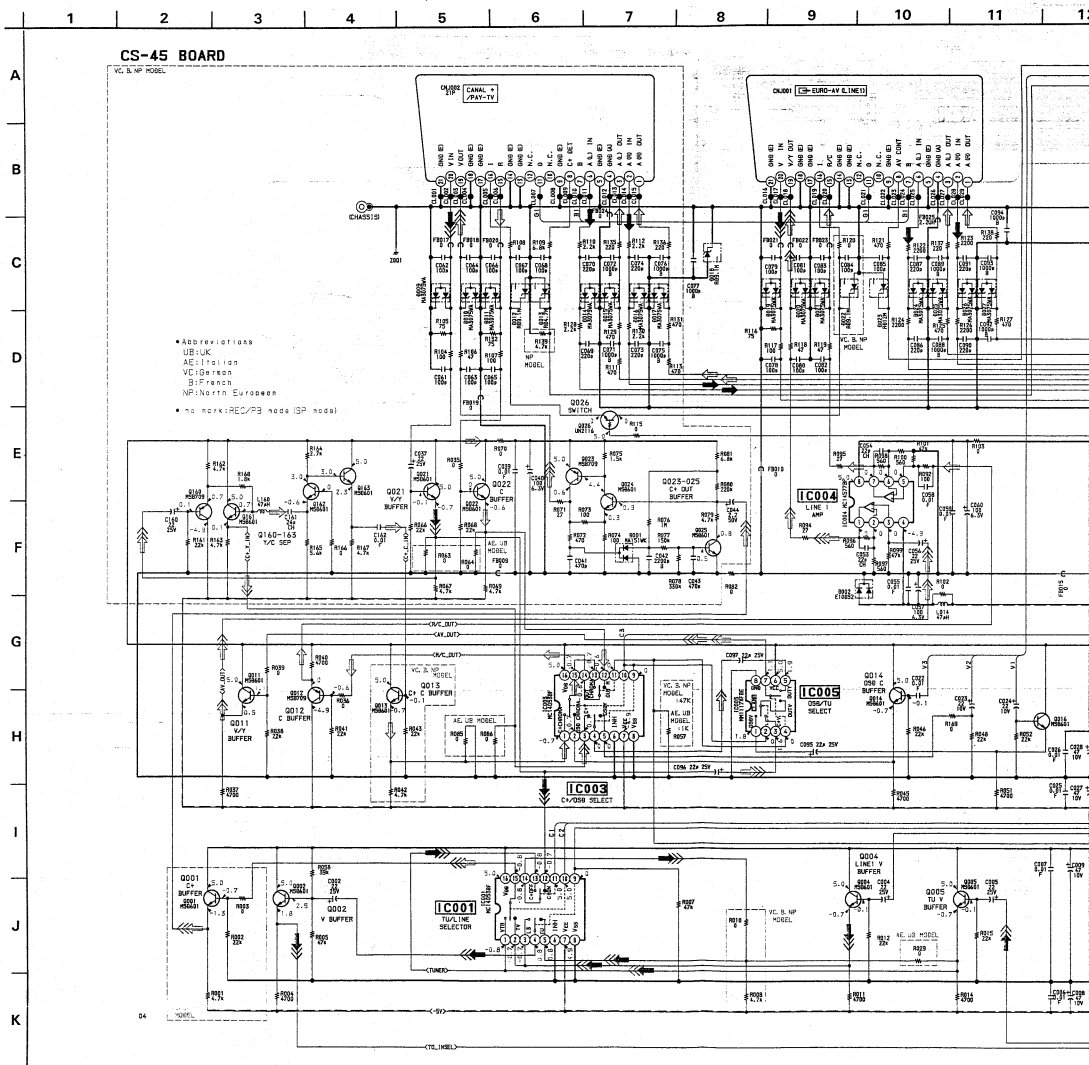
—Ref. No. CS-45 BOARD: 5000 series—



D001	D-11
D002	H-7
D009	I-10
D010	I-11
D011	I-12
D012	I-9
D013	H-8
D014	H-8
D015	H-8
D016	H-8
D017	L-7
D018	L-7
D019	H-5
D020	H-4
D021	H-4
D022	H-4
D023	H-3
D024	H-3
D025	H-2
D026	H-2
D027	H-2
D028	H-2
IC001	B-10
IC002	B-8
IC003	E-15
IC004	H-5
IC005	D-11
IC006	D-11
IC202	C-6
IC203	E-5
IC204	E-8
IC205	F-7
IC206	F-7
IC207	F-5
Q001	B-11
Q002	A-10
Q004	C-11
Q005	A-10
Q006	F-10
Q012	E-10
Q013	D-9
Q014	F-10
Q016	H-11
Q021	H-10
Q022	I-11
Q023	F-10
Q024	D-11
Q025	C-11
Q026	F-7
Q027	F-7
Q037	F-11
Q160	G-11
Q161	H-11
Q162	H-11
Q163	H-11



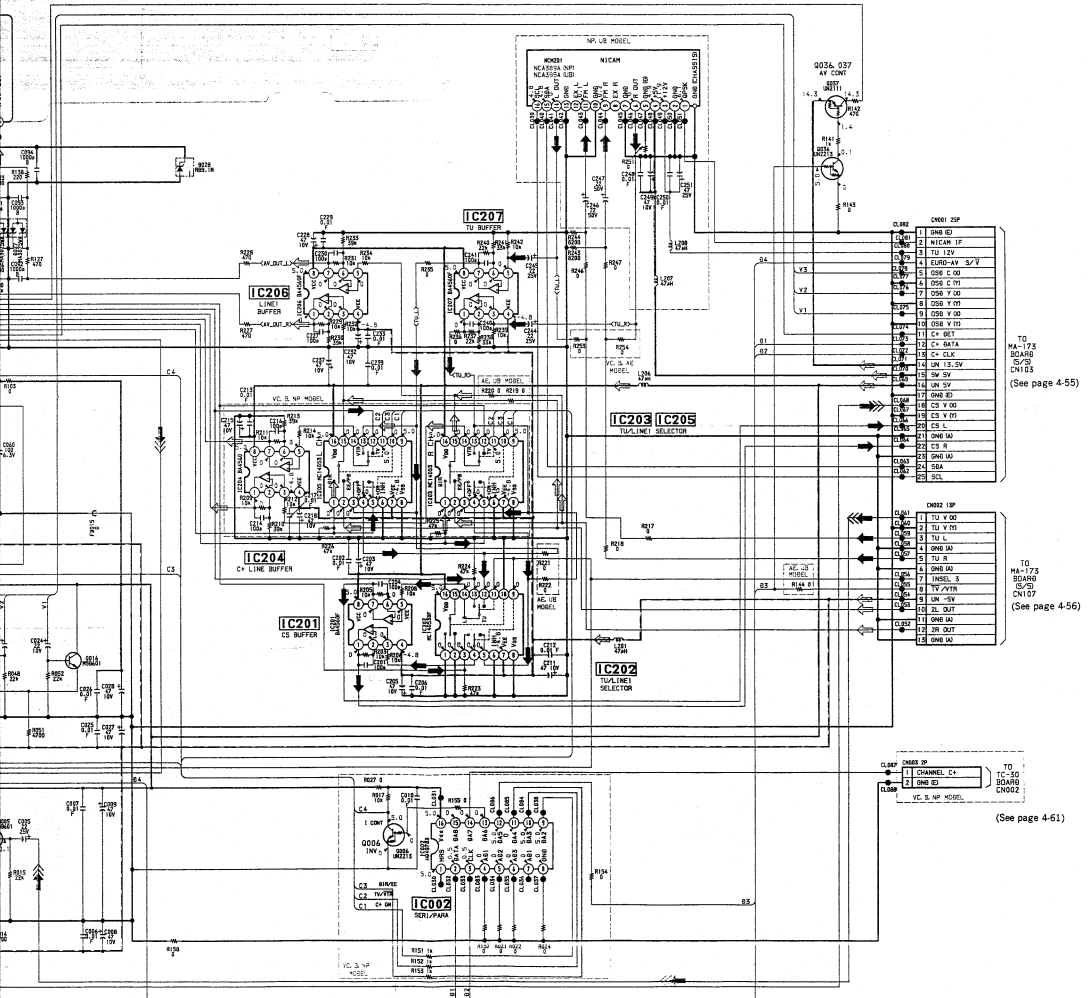
CS-45 (CANAL+, I/O, NICAM) SCHEMATIC DIAGRAM
—Ref. No. CS-45 BOARD: 5000 series—



• Signal path

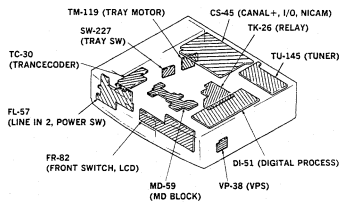
	VIDEO Signal		AUDIO Signal
	CHROMA	Y/CHROMA	
REC	→	→	→
PB	→	→	→

11 12 13 14 15 16 17 18 19 20 21 22

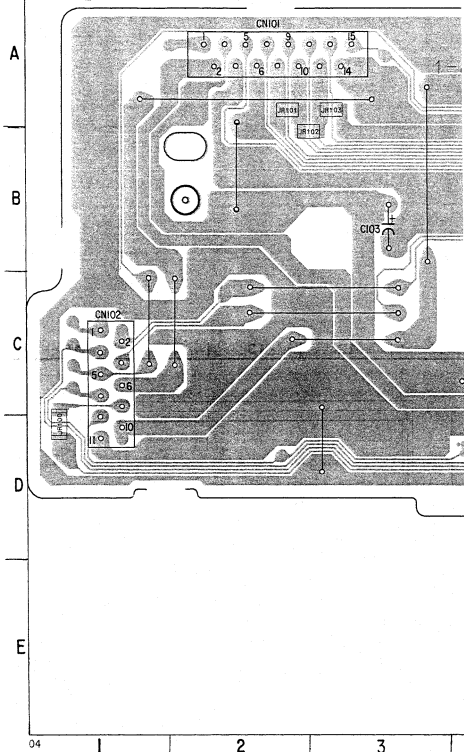


FR-82 (FRONT SWITCH, LCD), FL-57 (LINE IN2, POWER SWITCH) PRINTED WIRING BOARDS

—Ref. No. FR-82 and FL-57 BOARDS : 6000 series—



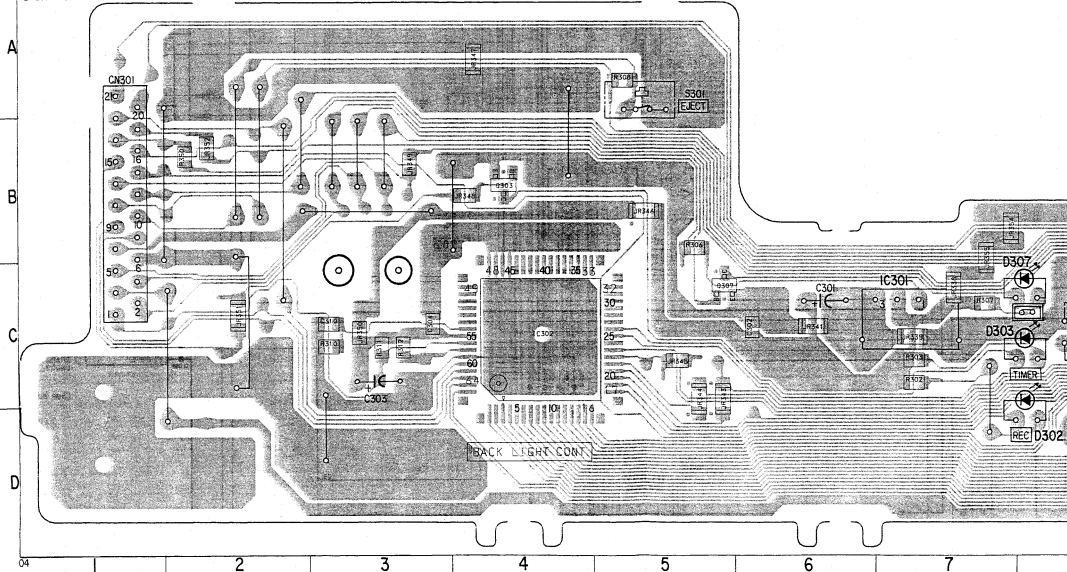
FL-57 BOARD

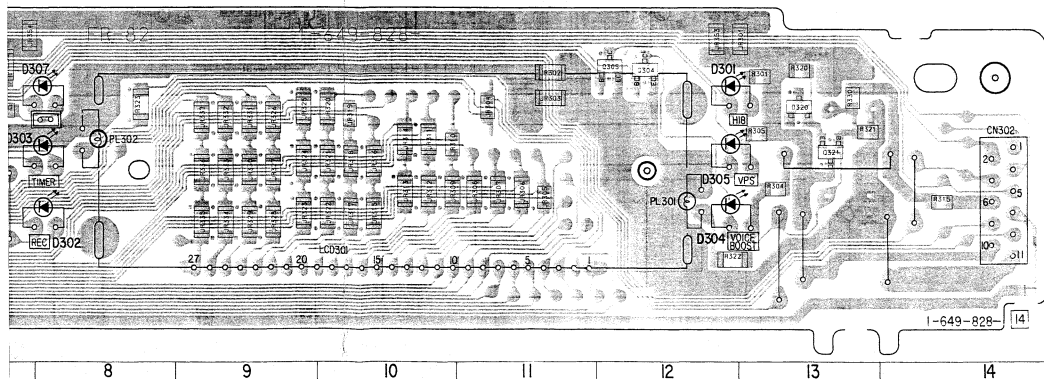
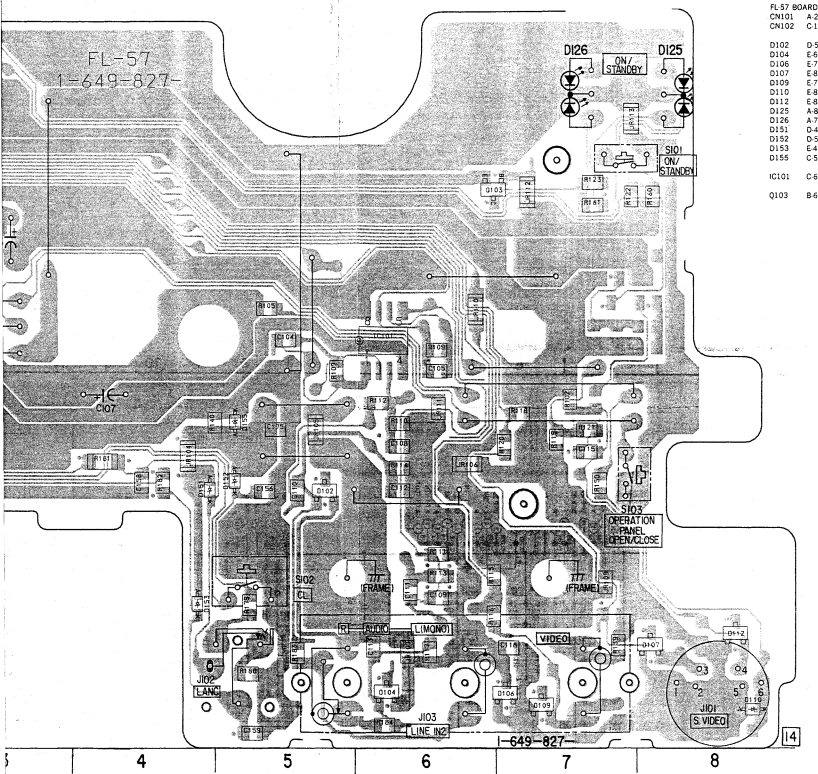


FR-82 BOARD
CN301 A-1
CN302 C-14

D301 C-12
D302 D-8
D303 C-8
D304 D-12
D305 C-12
D307 C-8
D320 C-13
IC301 C-7
IC302 C-4
Q303 B-2
Q304 C-12
Q305 C-12
Q307 C-5
Q321 C-13

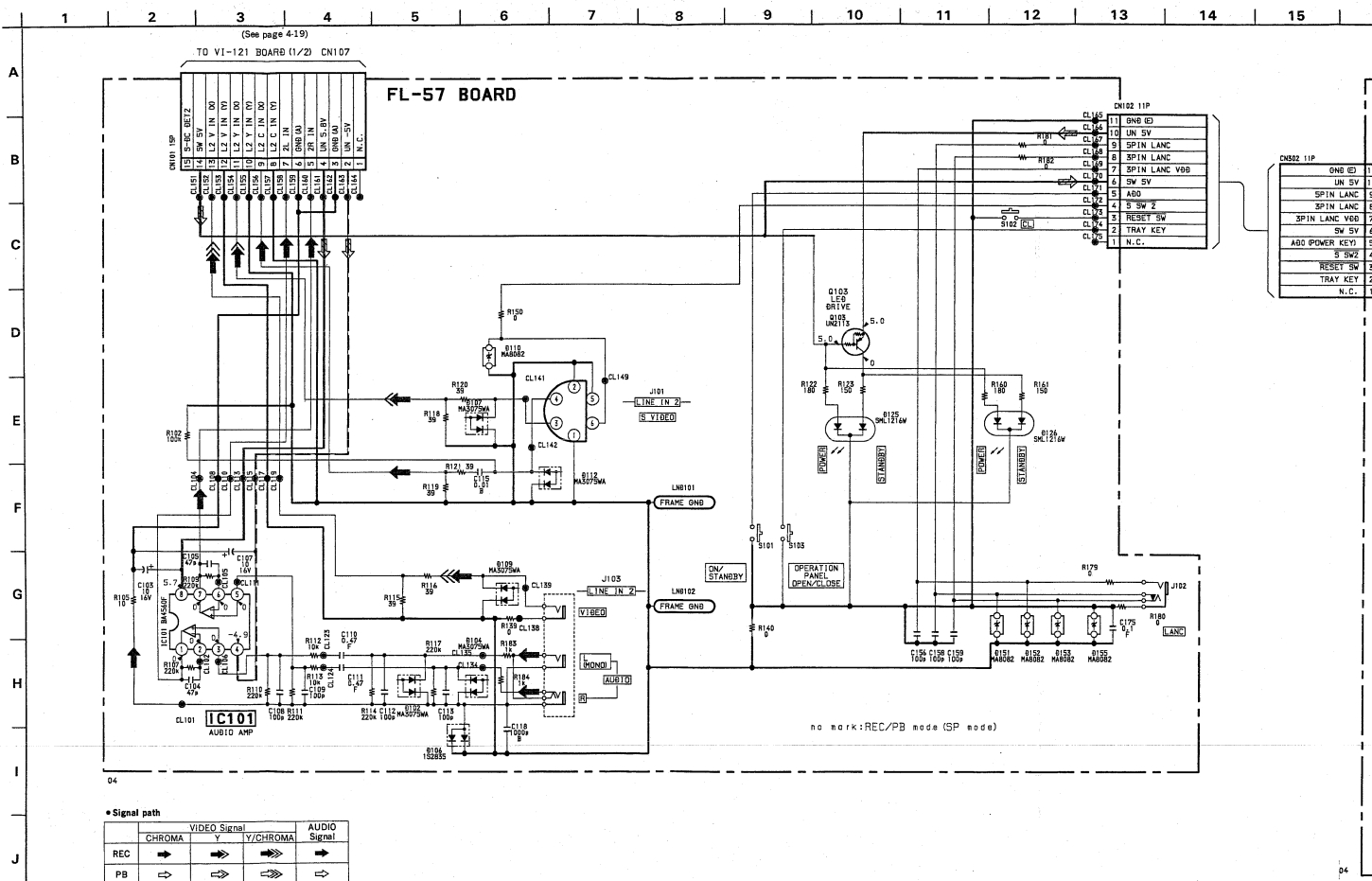
FR-82 BOARD





FR-82 (FRONT SWITCH, LCD), FL-57 (LINE IN2, POWER SWITCH) SCHEMATIC DIAGRAMS

—Ref. No. FR-82 and FL-57 BOARDS: 6000 series—



TO MA-173 BOARD (1/5) CN004

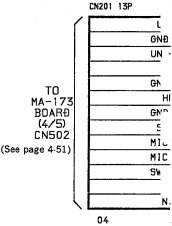
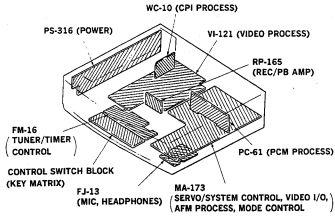
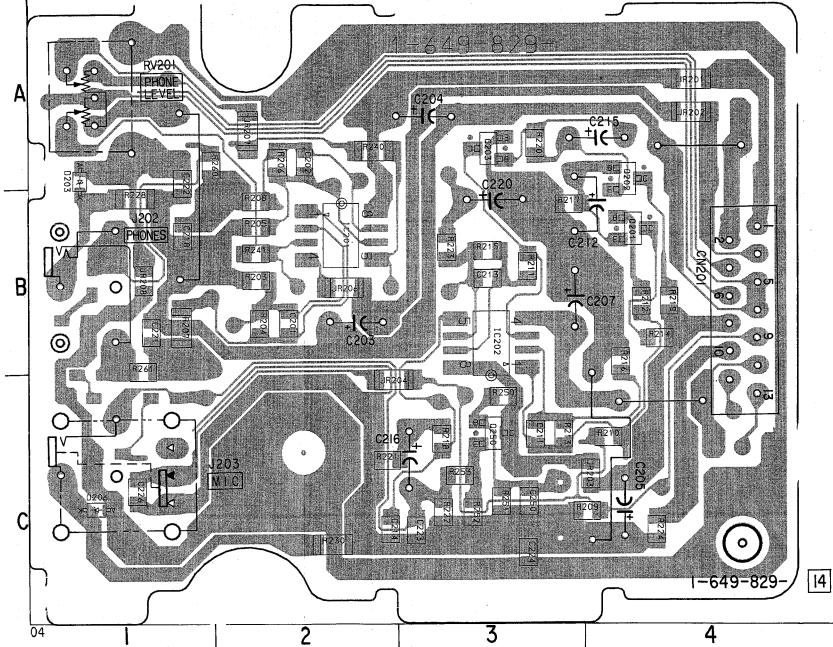


FJ-13 (MIC, HEADPHONES) PRINTED WIRING BOARD
—Ref. No. FJ-13 BOARD: 6000 series—

FJ-13 (MIC, HEADPHONES) SCHE
—Ref. No. FJ-13 BOARD: 6000 se

FJ13 BOARD
DN201 B-4
D203 A-1
Q206 C-1
IC201 B-2
IC202 B-3
Q201 B-4
Q202 A-4
Q203 A-3
Q250 C-3

FJ-13 BOARD

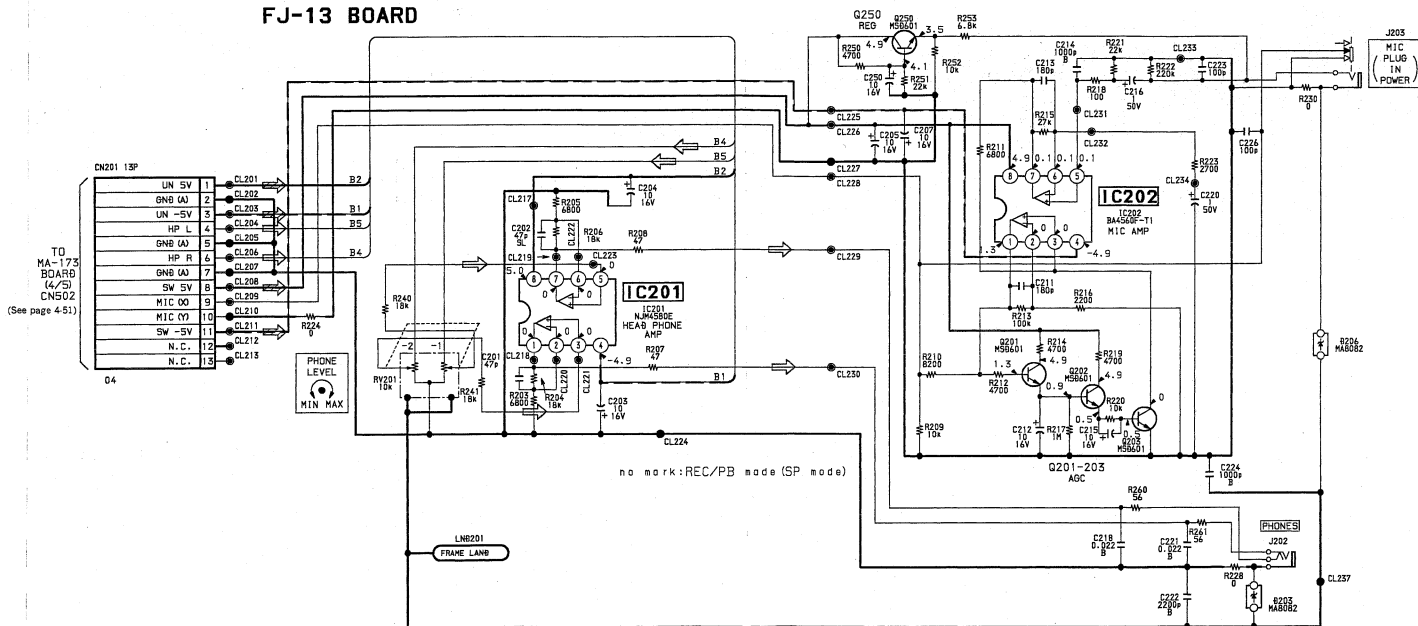


3 (MIC, HEADPHONES) SCHEMATIC DIAGRAM

f. o. FJ-13 BOARD : 6000 series—

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

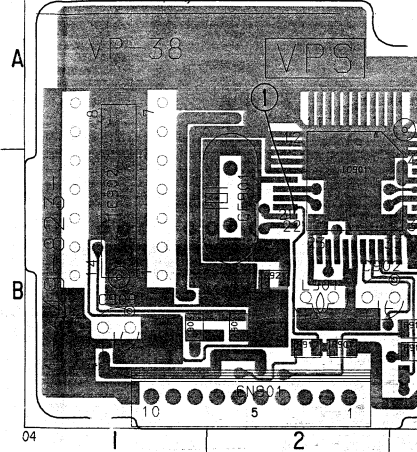
FJ-13 BOARD



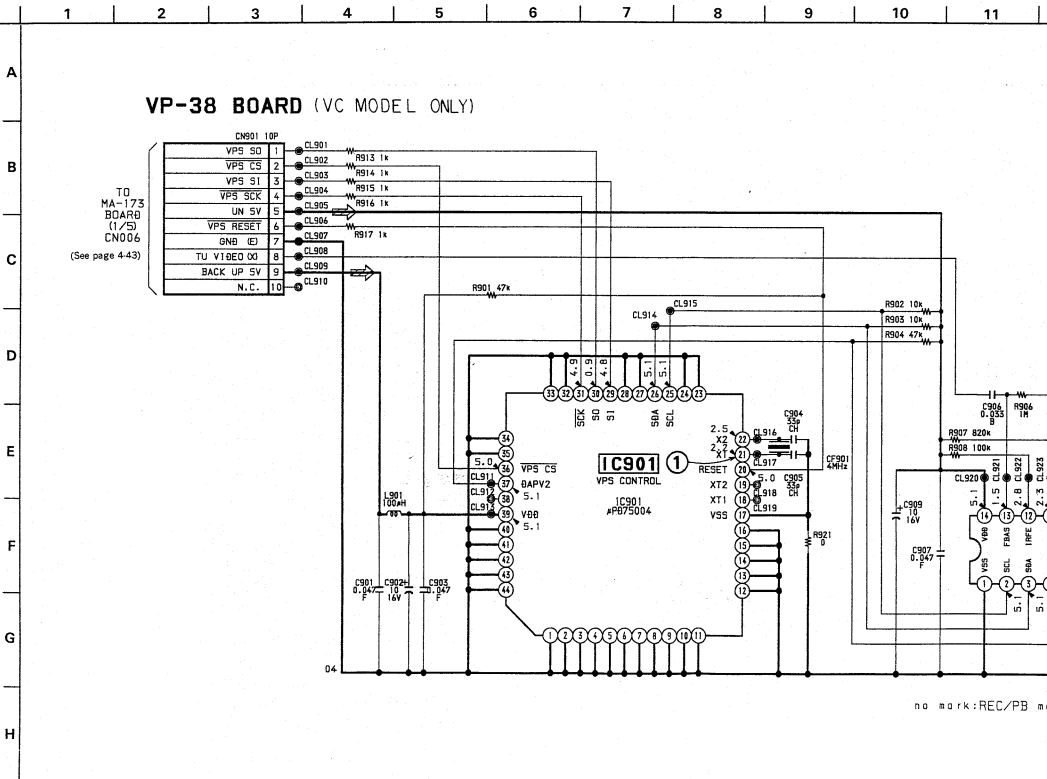
VP-38 (VPS) PRINTED WIRING BOARD
—Ref. No. VP-38 BOARD: 4000 series—

VP-38 BOARD
CN901 B-2
IC901 B-2
IC902 B-1

VP-38 BOARD (COMPONENT SIDE)

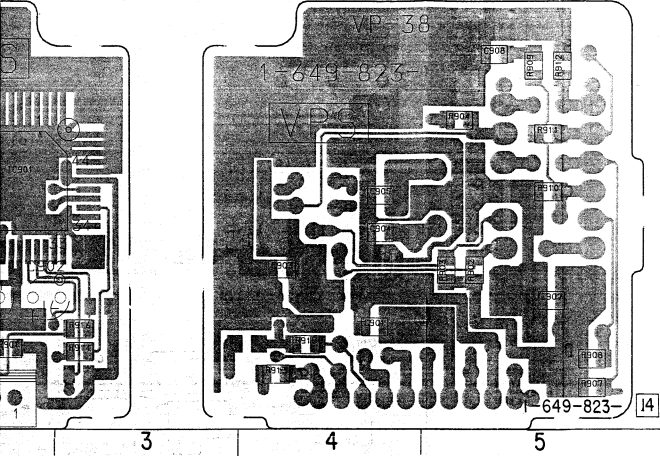


VP-38 (VPS) SCHEMATIC DIAGRAM
—Ref. No. VP-38 BOARD: 4000 series—

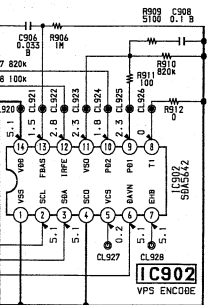
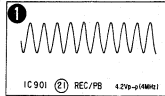


NT SIDE)

VP-38 BOARD(CONDUCTOR SIDE)

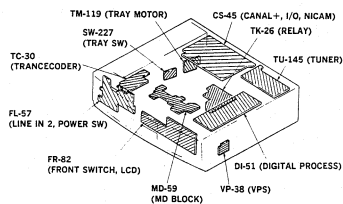


VP-38 BOARD



K: REC/PB mode (SP mode)

TU-145 (TUNER) PRINTED WIRING BOARD
—Ref. No. TU-145 BOARD: 5000 series—

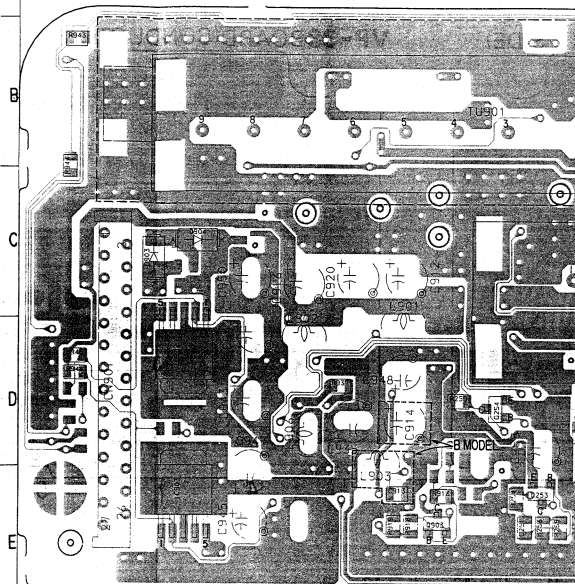


TU-145 BOARD
CH901 D-1

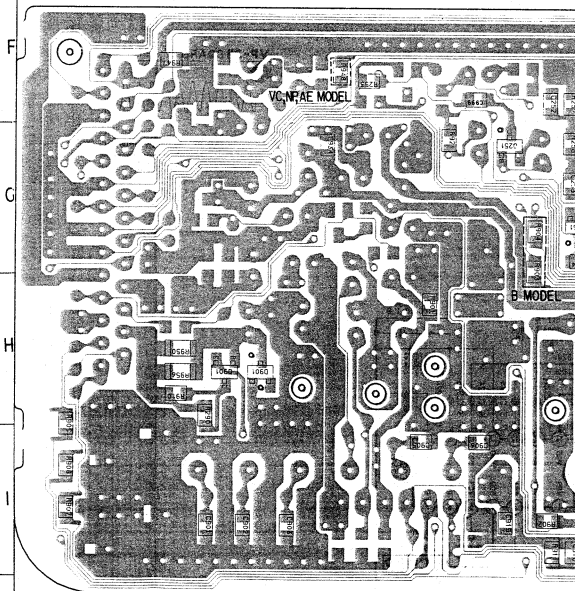
Q251 G-4
D901 H-2
D903 C-1
D904 C-2
IC901 E-6
IC902 D-2
IC903 E-2

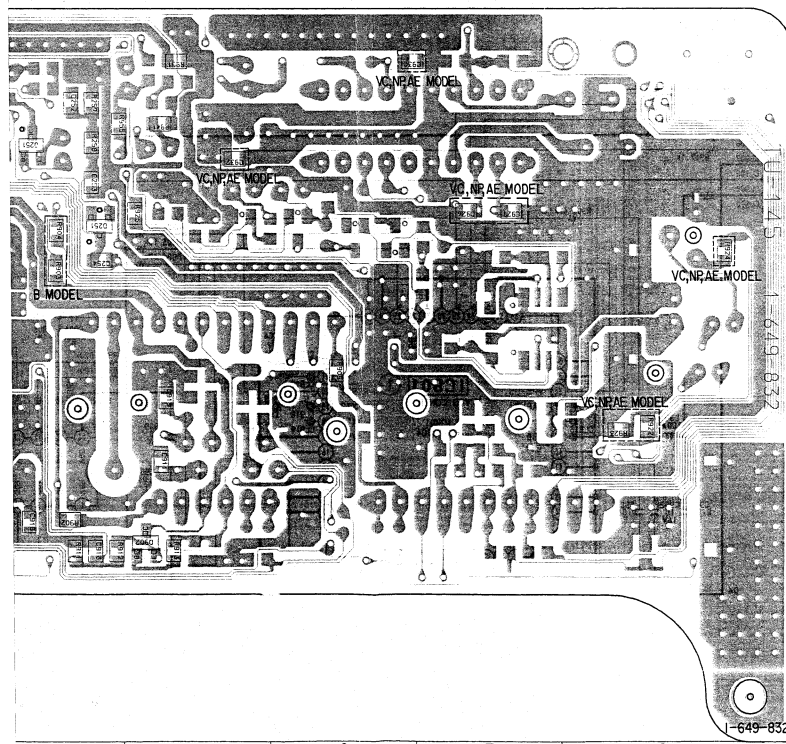
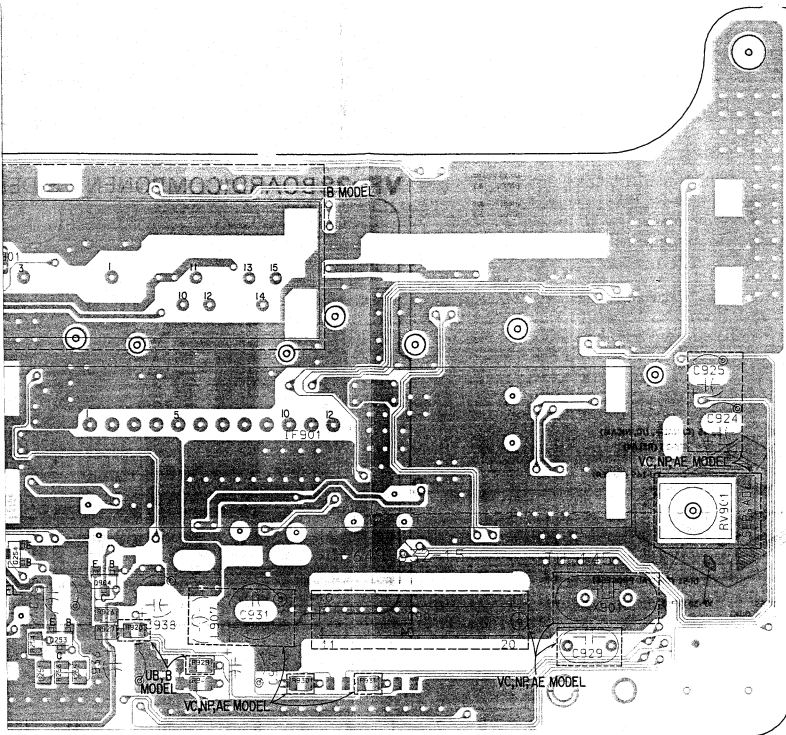
Q251 G-4
Q253 E-4
Q254 D-4
Q901 H-2
Q902 I-5
Q903 E-3
Q904 D-4

TU-145 BOARD (COMPONENT SIDE)



TU-145 BOARD (CONDUCTOR SIDE)



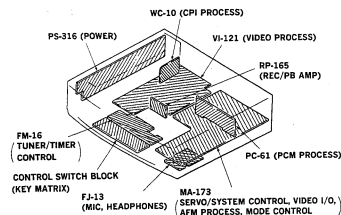




EV-S9000E AE/B/NP/UB/VC

PS-316 (POWER) PRINTED WIRING BOARD

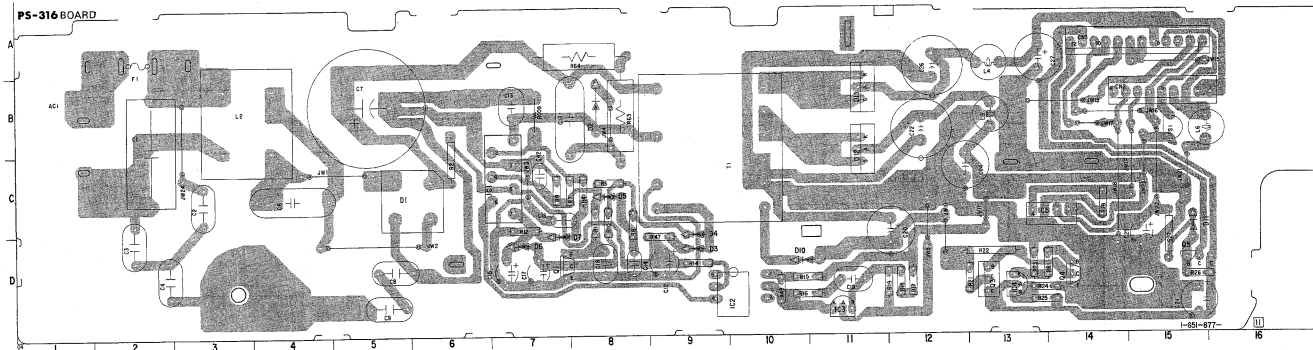
—Ref. No. PS-316 BOARD: 8000 series—



PS-316 BOARD

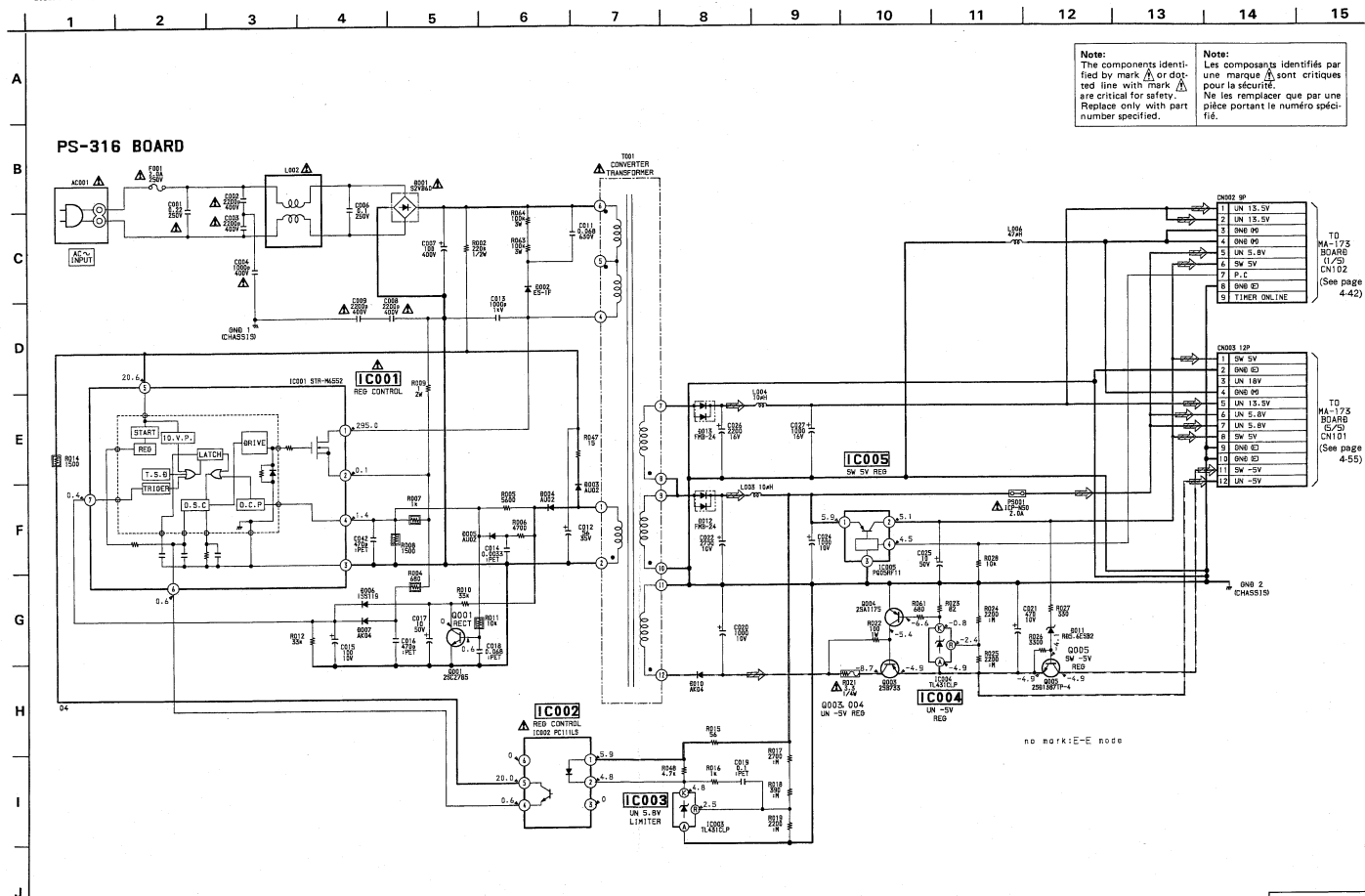
CND02 B:14
CND03 A:14

D001	C:5
D002	B:8
D003	D:9
D004	D:9
D005	C:8
D006	C:7
D007	D:7
D010	D:10
D011	C:15
D012	C:11
D013	B:11
IC001	C:6
IC002	D:10
IC003	D:11
IC004	D:13
IC005	C:13
Q001	D:7
Q003	D:13
Q004	D:14
Q005	D:15



PS-316 (POWER) SCHEMATIC DIAGRAM

—Ref. No. PS-316 BOARD: 8000 series—



4-3. SEMICONDUCTORS

DTA144EK
DTC114TK
DTC144EK
MSD601-RT1
UN211L
UN211I
UN211G
UN221I
UN221S
2SA1162-Y
2SA1226-E4
2SB1121-S
2SB1295-UL6
2SC1623-LSL6
2SC2223-F13
2SC2223-F14
2SC2712-YG
2SC3064-F
2SC3326N-A
2SD1328-RST
2SD601A-S

2SA1237F-6B



2SB733-34
2SD1387-3



2SD999-CLCK



2SD1805FA-F



1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR

AKO4V0



AU02A-V0
RD5.6ESB2
1SS119



DWA010



1. CATHODE
2. CATHODE
3. ANODE
4. ANODE

XN4213
XN4501



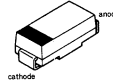
XN4312
XN4601



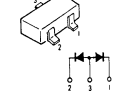
2SA1175-HFE
2SC2795-HFE



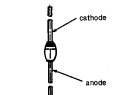
EC10DS2



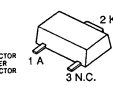
EC10Q5-04
1S2836



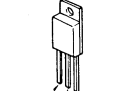
ES1F-N



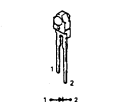
E10DS2



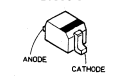
FMB-24



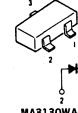
GL4535



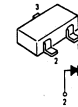
MA110
1T33C-01



MA152WK
MA701A
1SS184



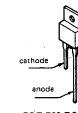
MA3130WA-TX
MA3330-H-TX
MA721WA-TX
RD13M-B1
RD3.0M-B1
RD4.7M-B
RD6.2M-B2
RD6.8M-B1
RD9.1M-B1
RD9.1M-B2
SBO5-05CP
1SS193



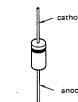
MA8068
MA8082-M



MSB709-RT1



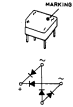
RD7.5M-B2
1SS83



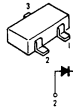
RD12M-B
SB10-05PCP



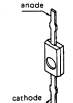
S2VB60



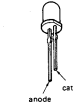
1SS226



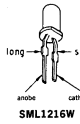
1T32



PY5504S-1



SLP281C-50
TLR123
TLY123



SML1216W



1. ANODE RED
2. CATHODE
3. ANODE GREEN

SECTION 5

REPAIR PARTS LIST

5-1. EXPLODED VIEWS

NOTE:

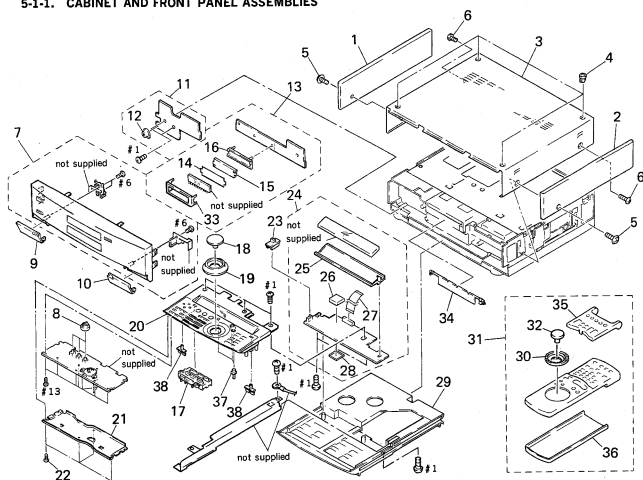
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviations
UB : UK
AE : Italian
VC : German
NP : North European
B : French

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

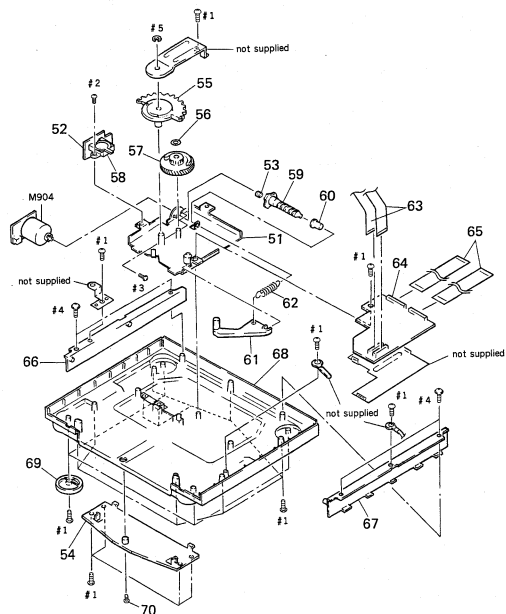
Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

5-1-1. CABINET AND FRONT PANEL ASSEMBLIES



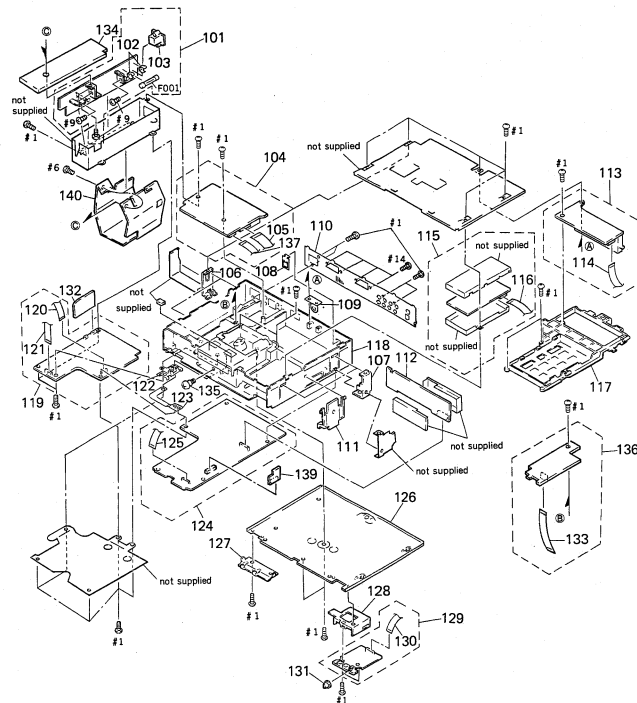
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-955-954-01	PANEL, (L), SIDE		19	3-955-947-01	RING, SHUTTLE	
2	3-955-953-01	PANEL, (R), SIDE		20	X-3944-100-1	HOUSING ASSY (VC)	
3	3-955-956-01	CASE, UPPER		20	X-3943-814-1	HOUSING ASSY (NP, AE, UB, B)	
4	3-953-526-01	FASTENER, TOP ORNAMENTAL		21	3-956-197-01	BRACKET, SWITCH	
5	3-743-801-01	SCREW, SIDE WOOD		22	3-713-790-21	SCREW (M2X6), TAPPING, P3	
6	3-710-901-11	SCREW, TAPPING		23	3-955-901-01	KNOB, SLIDE	
7	X-3943-820-1	PANEL ASSY, FRONT (VC)		24	A-7063-938-A	FM-16 (G) BOARD, COMPLETE	
7	X-3944-031-1	PANEL ASSY, FRONT (NP)		25	3-955-955-01	HOLDER, INDICATION TUBE	
7	X-3944-032-1	PANEL ASSY, FRONT (B)		26	3-955-927-01	CASE (MAIN), SHIELD, DO	
7	X-3944-033-1	PANEL ASSY, FRONT (UB)		27	1-751-609-11	CABLE, FLAT (FMF-5) 25P	
7	X-3944-034-1	PANEL ASSY, FRONT (AE)		28	X-3943-435-1	LID ASSY, DO SHIELD CASE REAR	
8	3-957-696-01	KNOB B		29	X-3943-495-1	TRAY ASSY (NP, AE, UB, B)	
9	3-955-945-11	DOOR (LEFT)		29	X-3943-495-3	TRAY ASSY (VC)	
10	3-955-946-21	DOOR (RIGHT)		30	3-955-358-01	RING, SHUTTLE	
11	A-7063-933-A	FL-57 (G) BOARD, COMPLETE		31	1-467-238-31	REMOTE COMMANDER (RMT-V1388)	
12	3-947-530-01	HOLDER, TERMINAL, S		32	3-955-359-01	DIAL, JOG	
13	A-7063-934-A	FR-82 (G) BOARD, COMPLETE		33	X-3943-675-1	PLATE ASSY, GROUND, LCD	
14	3-955-837-01	ILLUMINATOR		34	3-955-929-01	DOOR, CASSETTE COMPARTMENT	
15	3-955-930-01	PLATE, LIGHT GUIDE, LCD		35	3-708-870-01	COVER V1388	
16	3-955-931-01	HOLDER, LCD		36	3-954-582-11	COVER, SLIDE	
17	3-959-138-01	KEY TOP SET		37	3-957-535-01	KEY TOP	
18	3-955-359-11	DIAL, JOG		38	3-957-534-01	KNOB A	

5-1-2. TRAY CHASSIS COMPLETE ASSEMBLY



Ref. No.	Part No.	Description	Remark
* 51	X-3943-358-1	CHASSIS ASSY, DRIVING	
* 52	1-650-413-1	SW-227 BOARD	
53	3-955-686-01	RUBBER JOINT	
54	X-3943-361-2	STAY ASSY	
55	3-955-940-01	GEAR, FLAT	
56	3-606-510-01	WASHER (3), STOPPER	
57	3-955-925-01	GEAR, HELICAL	
58	1-571-300-21	SWITCH, ROTARY	
59	3-736-100-01	GEAR (FL), WORM	
60	3-716-144-02	RETAINER, WORM	
61	3-955-824-01	ARM, LOCK	

5-1-3. MAIN BOARDS ASSEMBLY

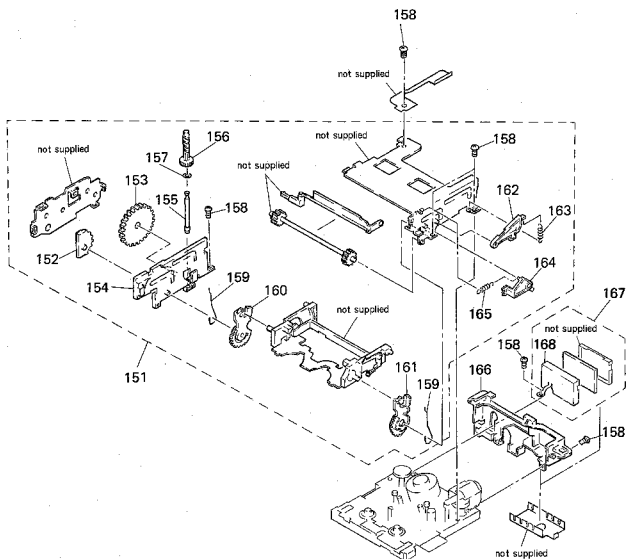


The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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Ref. No.	Part No.	Description	Remark
* 101	A-7063-938-A	PS-316 (G) BOARD, COMPLETE	
102	1-533-183-11	HOLDER, FUSE	
Δ 103	1-251-134-11	INLET, AC (NONPOLAR)	
* 104	A-7063-931-A	CS-45 (G) BOARD, COMPLETE (VC, B)	
* 104	A-7063-927-A	CS-45 (K) BOARD, COMPLETE (UB)	
* 104	A-7066-003-A	CS-45 (N) BOARD, COMPLETE (NP)	
* 104	A-7066-016-A	CS-45 (I) BOARD, COMPLETE (AE)	
105	1-751-604-11	CABLE, FLAT (FMC-4) 25P	
* 106	3-955-823-01	PLATE, FIXED (L), BOTTOM PLATE	
* 107	3-955-822-01	PLATE, FIXED (R), BOTTOM PLATE	
* 108	3-955-903-01	PLATE, GROUND, RFU	
* 108	3-955-904-01	PLATE, GROUND, TU	
* 110	3-955-835-11	PLATE, ORNAMENTAL, JACK (VC)	
* 110	3-955-835-31	PLATE, ORNAMENTAL, JACK (AE)	
* 110	3-955-835-41	PLATE, ORNAMENTAL, JACK (NP)	
* 110	3-955-835-51	PLATE, ORNAMENTAL, JACK (UB)	
* 110	3-955-835-61	PLATE, ORNAMENTAL, JACK (B)	
* 111	3-955-936-01	COVER, CARD	
* 112	A-7063-930-A	PC-61 (G) BOARD, COMPLETE	
* 113	A-7063-936-A	TU-145 (G) BOARD, COMPLETE (VC, NP, AE)	
* 113	A-7063-994-A	TU-145 (F) BOARD, COMPLETE (B)	
* 113	A-7063-998-A	TU-145 (K) BOARD, COMPLETE (UB)	
114	1-751-603-11	CABLE, FLAT (FMT-1) 27P	
* 115	A-7063-932-A	D1-51 (G) BOARD, COMPLETE	
116	1-751-604-11	CABLE, FLAT (FMC-4) 25P	
* 117	3-955-949-01	HOLDER, PC BOARD	
* 118	3-955-960-01	FRAME, MOLD	

Ref. No.	Part No.	Description	Remark
* 119	A-7063-928-A	VI-121 (G) BOARD, COMPLETE (VC, NP, B)	
* 119	A-7066-000-A	VI-121 (I) BOARD, COMPLETE (AE, UB)	
120	1-751-600-11	CABLE, FLAT (FVB-1) 21P	
121	1-751-606-11	CABLE, FLAT (FV-2) 15P	
* 122	3-955-911-01	PLATE, GROUND, MD	
* 123	3-955-937-01	PLATE, GROUND, MA	
* 124	A-7063-927-A	MA-173 (G) BOARD, COMPLETE (VC)	
* 124	A-7063-993-A	MA-173 (F) BOARD, COMPLETE (B)	
* 124	A-7063-996-A	MA-173 (K) BOARD, COMPLETE (UB)	
* 124	A-7066-002-A	MA-173 (N) BOARD, COMPLETE (NP)	
* 124	A-7066-015-A	MA-173 (I) BOARD, COMPLETE (AE)	
125	1-751-605-11	CABLE, FLAT (FMC-6) 21P	
* 126	3-955-951-01	PLATE, BOTTOM	
* 127	3-955-898-01	REINFORCEMENT (LEFT)	
* 128	X-2945-436-1	REINFORCEMENT (RIGHT) ASSY	
* 129	A-7063-935-A	FJ-13 (G) BOARD, COMPLETE	
130	1-751-602-11	CABLE, FLAT (FMC-9) 13P	
131	3-955-685-01	KNOB, VOLUME	
* 132	A-7063-929-A	WC-10 (G) BOARD, COMPLETE	
133	1-751-606-11	CABLE, FLAT (FMT-5)	
* 134	3-955-939-03	L10, POWER CASE, SHIELD	
135	3-741-948-01	SCREW (3), SPECIAL (+) TAPPING (VC)	
* 136	A-7063-940-A	TC-30 (G) BOARD, COMPLETE (VC, NP)	
* 136	A-7063-995-A	TC-30 (F) BOARD, COMPLETE (B)	
137	1-765-177-11	CABLE, FLEXIBLE FLAT (FMC-5) 13P	
* 139	A-7071-995-A	VP-38 (G) BOARD, COMPLETE (VC)	
140	3-959-319-01	POWER SHIELD SHEET	
Δ F001	1-576-228-11	FUSE, GLASS TUBE (250V/2A)	

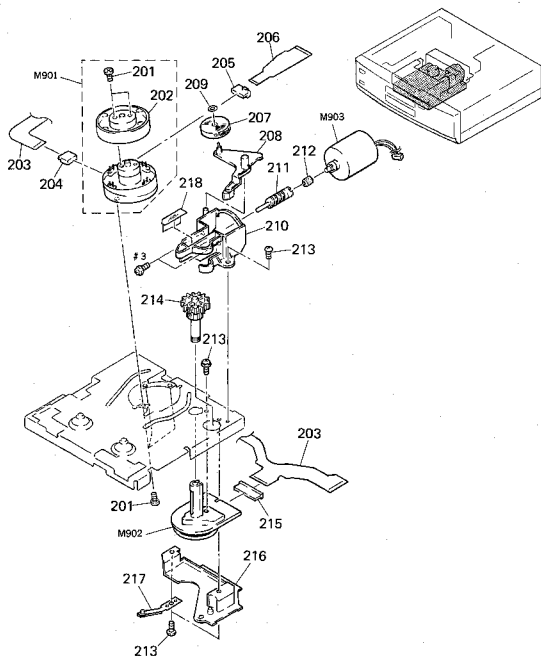
5-1-4. CASSETTE COMPARTMENT ASSEMBLY



Ref. No.	Part No.	Description	Remark
151	A-7091-941-A	FL BLOCK ASSY	
152	3-954-020-01	GEAR, DRIVING	
153	3-954-019-01	WHEEL, PL WORM	
* 154	3-954-032-01	PLATE (S), SIDE	
* 155	3-954-029-01	SHAFT, FL WORM GEAR	
156	3-954-028-01	GEAR, FL WORM	
157	3-736-212-11	RETAINER, THREEST, REEL TABLE	
158	3-732-817-01	SCREW (2X4.5), TAPPING	
159	3-954-042-01	SPRING, PRESS	

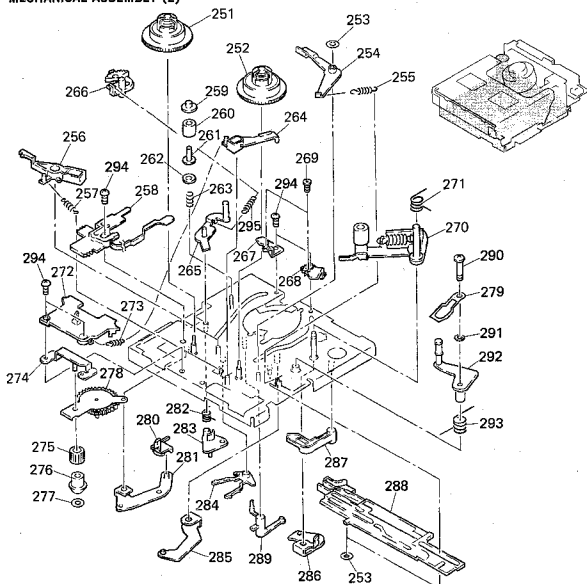
Ref. No.	Part No.	Description	Remark
160	3-954-034-01	ARM (S), DRIVING	
161	3-954-033-01	ARM (T), DRIVING	
* 162	3-954-040-01	ARM, CASSETTE IN SWITCH	
163	3-954-043-01	SPRING, TENSION	
* 164	3-954-041-01	ARM, DOOR SWITCHING	
165	3-954-044-01	SPRING, TENSION	
* 166	3-955-823-01	FRAME, RP	
* 167	A-7063-758-A	RP-165 BOARD, COMPLETE	
* 168	3-955-821-01	CASE (MAIN), SHIELD, RP	

5-1-5. MECHANICAL ASSEMBLY (1)



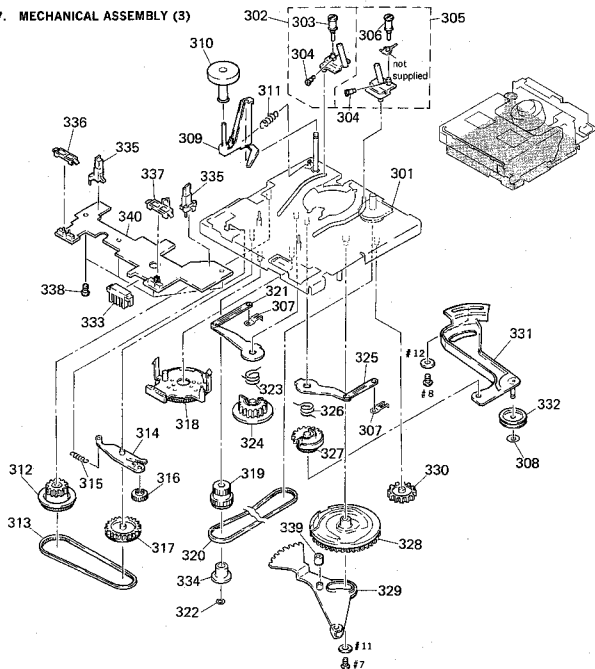
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-686-493-01	SCREW (M2X5), P1		213	3-732-817-01	SCREW (2X4.5), TAPPING	
202	A-7049-629-A	UPPER DRUM ASSY (DGR-080-R)		214	3-954-023-01	WHEEL, CAM WORM	
203	1-649-836-11	FP-695 FLEXIBLE BOARD		215	1-764-137-11	CONNECTOR, TRANSLATION 15P	
204	1-691-254-13	CONNECTOR, TRANSLATION 10P		* 216	3-954-049-01	RETAINER, WORM WHEEL	
205	1-691-471-11	CONNECTOR, TRANSLATION 11P		217	X-3942-060-1	GROUND ASSY, SHAFT	
206	1-649-565-11	FP-696 FLEXIBLE BOARD		+ 218	3-958-047-01	COVER, MOTOR HOLDER	
207	X-3943-192-1	ROLLER ASSY, HC		M901	A-7048-696-A	DRUM ASSY (DGH-080A-R)	
208	X-3942-947-1	ARM ASSY, HC		M902	8-835-499-01	MOTOR, DC SCE-0501A	
209	3-321-393-01	WASHER, STOPPER		M903	X-3942-946-1	MOTOR ASSY, CAM	
210	3-954-024-01	HOLDER, MOTOR					
211	3-733-395-01	GEAR (CAM), WORM					
212	3-696-288-01	RUBBER, JOINT					

5-1-6. MECHANICAL ASSEMBLY (2)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	X-3942-954-1	TABLE (S) ASSY, REEL		274	X-3943-182-1	BASE ASSY, PENDULUM	
252	X-3942-953-1	TABLE (T) ASSY, REEL		275	3-954-059-01	GEAR, PENDULUM DRIVING	
253	3-658-465-00	WASHER (1.5), STOPPER		276	3-954-321-01	BEARING, PENDULUM DRIVING	
254	X-3943-161-1	BRAKE (T) ASSY		277	3-726-829-01	WASHER, STOPPER	
255	3-953-976-01	SPRING, TENSION		278	X-3942-951-1	GEAR ASSY, PENDULUM	
256	3-954-071-01	ARM, BRAKE (S)		279	3-954-093-01	SPACER, TGT	
257	3-954-085-01	SPRING, TENSION		280	3-953-975-01	CLAW, S TAKE-UP	
258	X-3942-956-1	BAND ASSY, TENSION REGULATOR		281	3-953-974-01	ARM, S TAKE-UP	
259	3-726-884-01	FLANGE, UPPER, TGT		282	3-956-366-01	SPRING, TORSION	
260	3-726-883-01	ROLLER, TGT		283	3-954-100-01	ARM, TENSION REGULATOR SUB	
261	3-726-885-01	SLEEVE, TGT		284	3-953-973-01	ARM, PENDULUM COMPULSION	
262	3-726-882-02	FLANGE, LOWER, TGT		285	3-954-007-01	LEVER, SLIDE PLATE DRIVING	
263	3-954-001-01	SPRING, COMPRESSION		286	3-954-009-01	LEVER, PINCH DRIVING	
264	X-3943-111-1	BRAKE (T) ASSY, SOFT		287	3-954-016-01	LEVER, TGT DRIVING	
265	X-3942-955-1	TENSION REGULATOR ASSY		288	3-953-972-01	PLATE, SLIDE	
266	3-954-103-01	ARM, TENSION ADJUSTMENT		289	3-954-072-01	LEVER, BRAKE (S) DRIVING	
267	3-954-080-01	CATCHER (S)		290	3-954-006-01	SCREW, TGT HEIGHT ADJUSTMENT	
268	3-954-091-01	CATCHER (T)		291	3-738-212-1	RETAINER, THRUST, REEL TABLE	
269	3-954-285-01	SCREW (M1. X0.2)		292	X-3942-958-1	ARM ASSY, TGT	
270	X-3942-945-1	ARM ASSY, PINCH		293	3-954-003-01	SPRING (TGT), TORSION	
271	3-954-105-01	SPRING (PINCH DRIVING)		294	3-732-817-01	SCREW (2X4.5), TAPPING	
272	3-954-063-01	PLATE, RELEASE, REEL LOCK		295	3-954-074-01	SPRING, TENSION	
273	3-955-142-01	SPRING, TENSION					

5-1-7. MECHANICAL ASSEMBLY (3)



Ref. No.	Part No.	Description
* 301	X-3942-952-1	CHASSIS ASSY, MECHANICAL
302	A-7040-338-A	COASTER (S) BLOCK ASSY
303	X-3941-755-1	ROLLER ASSY (2), TG2
304	3-947-504-01	SCREW (M1.2X2)
305	A-7040-339-A	COASTER (T) BLOCK ASSY
306	X-3941-756-1	ROLLER ASSY (2), TG6
307	3-953-649-01	SPRING, LEAF, COASTER
308	3-726-829-01	WASHER, STOPPER
309	X-3943-015-1	BASE ASSY, ROLLER
310	3-954-282-01	ROLLER (M)
311	3-954-294-01	SPRING, TENSION
312	3-953-983-01	GEAR, FL PULLEY
313	3-954-078-01	BELT (FL), TIMING
314	3-953-979-01	ARM, FL SELECTION
315	3-953-982-01	SPRING, TENSION
316	3-953-980-01	GEAR, FL SELECTION
317	3-953-981-01	GEAR (DRIVING), FL PULLEY
318	1-692-498-11	SWITCH, ROTARY
319	3-954-081-01	GEAR, REEL RELAY
320	3-953-985-01	BELT, TIMING

Remark

Ref. No.	Part No.	Description	Remark
321	X-3942-949-1	ARM (S) ASSY, LOADING	
322	3-726-829-01	WASHER, STOPPER	
323	3-953-998-01	SPRING (S), TORSION	
324	3-953-991-01	GEAR (S), LOADING	
325	X-3942-948-1	ARM (T) ASSY, LOADING	
326	3-954-000-01	SPRING (T), TORSION	
327	3-953-992-01	GEAR (T), LOADING	
328	3-954-050-01	CAM, MAIN	
* 329	3-954-014-01	LEVER, LOADING DRIVING	
330	3-954-015-01	GEAR, CAM RELAY	
331	X-3942-962-1	BASE ASSY, PULLEY	
332	X-3943-016-1	PULLEY ASSY, BELT	
333	1-750-620-11	CONNECTOR (MMS MD)	
334	3-954-102-02	FLANGE, REEL RELAY	
335	3-953-665-01	HOLDER, ST SENSOR	
336	3-954-638-01	HOLDER (S), PUSH SWITCH	
337	3-954-639-01	HOLDER (T), PUSH SWITCH	
338	3-732-817-01	SCREW (2X4.5), TAPPING	
339	3-954-323-01	ROLLER, LOADING	
* 340	1-648-300-11	MD-59 BOARD	

CONTROL SWITCH BLOCK

5-2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: Nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. NP: North European
Some delay should be anticipated when ordering these items.

SEMICONDUCTORS

In each case, u: μ , for example:

uA...: μ A. uPA...: μ PA.
uPB...: μ PB. uPC...: μ PC. uPD...: μ PD.

CAPACITORS

uF: μ F

When indicating parts by reference number, please include the board.

COILS

uH: μ H

Abbreviations

UB: UK

AE: Italian

VC: German

B: French

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
*		CONTROL SWITCH BLOCK (Supplied with HOUSING ASSY) (Ref.No 7,000 series)	

< CONNECTOR >

CN401 1-568-867-11 FPC CONNECTOR 25P

< DIODE >

D420	8-719-037-97 LED	CL-190R-CD (TIME CORD WRITE)	
D421	8-719-037-97 LED	CL-190R-CD (AUDIO PUG)	
D423	8-719-037-97 LED	CL-190R-CD (HIFI)	
D424	8-719-047-66 LED	CL-190D-CD (7BC)	
D425	8-719-047-66 LED	CL-190D-CD (DNR)	
D426	8-719-037-96 LED	CL-190G-CD (PCM)	
D427	8-719-037-97 LED	CL-190R-CD (EDIT STBY)	
D428	8-719-037-96 LED	CL-190G-CD (LANG REMOTE)	
D429	8-719-037-96 LED	CL-190G-CD (PLAY)	
D430	8-719-037-96 LED	CL-190G-CD (PLAY)	

D431	8-719-037-96 LED	CL-190G-CD (STOP)	
D432	8-719-037-96 LED	CL-190G-CD (STOP)	

< JUMPER RESISTOR >

JR401	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR402	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR403	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR404	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR405	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR406	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR407	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR408	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR409	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR410	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR411	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR412	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR413	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR414	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR415	1-216-296-11 METAL CHIP	0 5% 1/8W	A

Ref. No.	Part No.	Description	Remark
JR416	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR417	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR418	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR419	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR420	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR421	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR422	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR423	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR424	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR425	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR426	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR427	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR428	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR429	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR430	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR431	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR432	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR433	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR434	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR435	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR436	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR437	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR438	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR439	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR440	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR441	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR442	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR443	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR444	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR445	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR446	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR447	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR448	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR449	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR450	1-216-296-11 METAL CHIP	0 5% 1/8W	A
JR451	1-216-296-11 METAL CHIP	0 5% 1/8W	A

CONTROL SWITCH BLOCK

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
JR452	1-216-296-11	METAL CHIP	0 5% 1/8W A	R427	1-216-095-11	METAL CHIP	82K 1/10W
JR453	1-216-296-11	METAL CHIP	0 5% 1/8W A	R428	1-216-048-11	METAL CHIP	1K 1/10W
JR454	1-216-296-11	METAL CHIP	0 5% 1/8W A	R429	1-216-033-11	METAL CHIP	220 1/10W
JR455	1-216-296-11	METAL CHIP	0 5% 1/8W A	R430	1-216-033-11	METAL CHIP	220 1/10W
JR456	1-216-296-11	METAL CHIP	0 5% 1/8W A	R431	1-216-033-11	METAL CHIP	220 1/10W
JR457	1-216-296-11	METAL CHIP	0 5% 1/8W A	R432	1-216-033-11	METAL CHIP	220 1/10W
JR458	1-216-296-11	METAL CHIP	0 5% 1/8W A	R433	1-216-037-11	METAL CHIP	330 1/10W
JR459	1-216-296-11	METAL CHIP	0 5% 1/8W A	R434	1-216-037-11	METAL CHIP	330 1/10W
JR460	1-216-296-11	METAL CHIP	0 5% 1/8W A	R435	1-216-037-11	METAL CHIP	330 1/10W
JR461	1-216-296-11	METAL CHIP	0 5% 1/8W A	R436	1-216-037-11	METAL CHIP	330 1/10W
JR462	1-216-296-11	METAL CHIP	0 5% 1/8W A	R437	1-216-041-11	METAL CHIP	470 1/10W
JR463	1-216-296-11	METAL CHIP	0 5% 1/8W A	R438	1-216-041-11	METAL CHIP	470 1/10W
< TRANSISTOR >				R439	1-216-190-11	METAL CHIP	470 1/8W
Q401	8-729-421-19	TRANSISTOR	UN2213 A	R440	1-216-041-11	METAL CHIP	470 1/10W
Q402	8-729-421-19	TRANSISTOR	UN2213 A	R441	1-216-095-11	METAL CHIP	82K 1/10W
Q403	8-729-421-19	TRANSISTOR	UN2213 A	R442	1-216-075-00	METAL CHIP	12K 1/10W
Q404	8-729-421-19	TRANSISTOR	UN2213 A	R443	1-216-077-11	METAL CHIP	15K 1/10W
Q405	8-729-421-19	TRANSISTOR	UN2213 A	R443	1-216-048-11	METAL CHIP	310 1/10W
Q406	8-729-421-19	TRANSISTOR	UN2213 A	R443	1-216-061-11	METAL CHIP	3.3K 1/10W
Q407	8-729-421-19	TRANSISTOR	UN2213 A	R444	1-216-190-11	METAL CHIP	1K 1/8W
Q408	8-729-421-19	TRANSISTOR	UN2213 A	R445	1-216-049-11	METAL CHIP	1K 1/10W
< RESISTOR >				R446	1-216-198-11	METAL CHIP	1K 1/8W
R401	1-216-182-11	METAL CHIP	220 1/8W	R447	1-216-049-11	METAL CHIP	1K 1/10W
R402	1-216-033-11	METAL CHIP	220 1/10W	R448	1-216-049-11	METAL CHIP	1K 1/10W
R403	1-216-033-11	METAL CHIP	220 1/10W	R449	1-216-182-11	METAL CHIP	220 1/8W
R404	1-216-037-11	METAL CHIP	330 1/10W	R450	1-216-057-11	METAL CHIP	2.2K 1/10W
R405	1-216-182-11	METAL CHIP	220 1/8W	R452	1-216-057-11	METAL CHIP	2.2K 1/10W
R406	1-216-033-11	METAL CHIP	220 1/10W	R453	1-216-031-11	METAL CHIP	180 1/10W
R407	1-216-033-11	METAL CHIP	220 1/10W	R454	1-216-031-11	METAL CHIP	180 1/10W
R408	1-216-041-11	METAL CHIP	470 1/10W	R455	1-216-031-11	METAL CHIP	180 1/10W
R409	1-216-186-11	METAL CHIP	330 1/8W	R457	1-216-031-11	METAL CHIP	180 1/10W
R410	1-216-037-11	METAL CHIP	330 1/10W	R458	1-216-031-11	METAL CHIP	180 1/10W
R411	1-216-037-11	METAL CHIP	330 1/10W	R459	1-216-031-11	METAL CHIP	180 1/10W
R412	1-216-190-11	METAL CHIP	470 1/8W	R460	1-216-031-11	METAL CHIP	180 1/10W
R413	1-216-041-00	METAL CHIP	470 1/10W	R461	1-216-031-11	METAL CHIP	180 1/10W
R414	1-216-190-11	METAL CHIP	470 1/8W	R465	1-216-296-11	METAL CHIP	0 1/8W
R415	1-216-049-11	METAL CHIP	1K 1/10W	R466	1-216-296-11	METAL CHIP	0 1/8W
R416	1-216-057-11	METAL CHIP	2.2K 1/10W	R467	1-216-031-11	METAL CHIP	180 1/8W
R417	1-216-049-11	METAL CHIP	1K 1/10W	R470	1-216-296-11	METAL CHIP	0 1/8W
R418	1-216-049-11	METAL CHIP	1K 1/10W	R471	1-216-031-11	METAL CHIP	180 1/10W
R421	1-216-206-11	METAL CHIP	2.2K 1/8W	R472	1-216-031-11	METAL CHIP	180 1/10W
R421	1-216-206-11	METAL CHIP	2.2K 1/8W	R473	1-216-031-11	METAL CHIP	180 1/10W
R422	1-216-206-11	METAL CHIP	2.2K 1/8W	R474	1-216-031-11	METAL CHIP	180 1/10W
R423	1-216-033-11	METAL CHIP	220 1/10W	< VARIABLE RESISTOR >			
R424	1-216-033-11	METAL CHIP	220 1/10W	RV401	1-223-521-11	RES. ADJ. CARBON 100K	(PCM/AFM/STD AUDIO LEVEL)
R425	1-216-033-11	METAL CHIP	220 1/10W	RV402	1-223-521-11	RES. ADJ. CARBON 100K	(PCM REC LEVEL)
R426	1-216-182-11	METAL CHIP	220 1/8W	RV403	1-223-521-11	RES. ADJ. CARBON 100K	(PCM REC BALANCE)

CONTROL SWITCH BLOCK CS-45

Ref. No.	Part No.	Description	Remark
< SWITCH >			
S401	1-692-925-11	SWITCH, TACTIL (LAWC REMOTE)	
S402	1-692-925-11	SWITCH, TACTIL (TIMER REC)	
S403	1-692-925-11	SWITCH, TACTIL (■ STOP)	
S404	1-692-925-11	SWITCH, TACTIL (PAUSE)	
S405	1-692-925-11	SWITCH, TACTIL (EDIT STOP)	
S406	1-692-925-11	SWITCH, TACTIL (QUICK TIMER)	
S407	1-692-925-11	SWITCH, TACTIL (● REC)	
S408	1-692-925-11	SWITCH, TACTIL (HI-SPEED REWIND)	
S409	1-692-925-11	SWITCH, TACTIL (SYNCHRO EDIT/START)	
S410	1-692-925-11	SWITCH, TACTIL (INPUT SELECT)	
S411	1-692-925-11	SWITCH, TACTIL (> PLAY)	
S412	1-692-925-11	SWITCH, TACTIL (TIMER CHECK)	
S413	1-692-925-11	SWITCH, TACTIL (ASSEMBLE)	
S415	1-692-925-11	SWITCH, TACTIL (PROGRAM -)	
S416	1-692-925-11	SWITCH, TACTIL (MARK)	
S417	1-692-926-11	SWITCH, SLIDE (PCM/MIX/STD)	
S418	1-692-925-11	SWITCH, TACTIL (PROGRAM +)	
S419	1-692-925-11	SWITCH, TACTIL (EDIT MONITOR)	
S423	1-692-925-11	SWITCH, TACTIL (BACK)	
S425	1-692-925-11	SWITCH, TACTIL (MENU)	
S426	1-692-925-11	SWITCH, TACTIL (EXECUTE)	
S428	1-692-925-11	SWITCH, TACTIL (COUNTER SELECT)	
S429	1-692-925-11	SWITCH, TACTIL (TV/VTR)	
S430	1-692-925-11	SWITCH, TACTIL (◀)	
S431	1-692-925-11	SWITCH, TACTIL (VPS) (VC)	
S432	1-692-925-11	SWITCH, TACTIL (FF ▶▶)	
S433	1-692-925-11	SWITCH, TACTIL (SP/LP)	
S434	1-692-925-11	SWITCH, TACTIL (▶)	
S435	1-692-925-11	SWITCH, TACTIL (EDIT)	
S436	1-692-925-11	SWITCH, TACTIL (REW ◀◀)	
S437	1-692-925-11	SWITCH, TACTIL (INDEX MARK)	
S438	1-692-925-11	SWITCH, TACTIL (▲)	
S439	1-692-925-11	SWITCH, TACTIL (ONK)	
S440	1-692-925-11	SWITCH, TACTIL (AUDIO DUB)	
S441	1-692-925-11	SWITCH, TACTIL (INDEX ERASE)	
S442	1-692-925-11	SWITCH, TACTIL (▼)	
S443	1-692-925-11	SWITCH, TACTIL (COUNTER RESET)	
S444	1-692-925-11	SWITCH, TACTIL (TIME CODE WRITE)	
S445	1-692-925-11	SWITCH, TACTIL (INDEX SEARCH ◀◀)	
S447	1-692-925-11	SWITCH, TACTIL (VISUAL SCAN)	
S449	1-692-925-11	SWITCH, TACTIL (INDEX SEARCH ▶▶)	
< SWITCH JOG/SHUTTLE >			
S450	1-692-722-11	SWITCH, JOG/SHUTTLE (<REVERSE/FORWARD>)	

Ref. No.	Part No.	Description	Remark
*	A-7063-831-A	CS-45 (G) BOARD, COMPLETE (VC, B)	
*	A-7063-997-A	CS-45 (K) BOARD, COMPLETE (UB)	
*	A-7066-003-A	CS-45 (H) BOARD, COMPLETE (NP)	
*	A-7066-016-A	CS-45 (I) BOARD, COMPLETE (AE)	

(Ref. No. 5,000 series)			
1-751-694-11 CABLE, FLAT (FMC-4)			
1-765-177-11 CABLE, FLEXIBLE FLAT (FMC-5)			
< CAPACITOR >			
C002	1-126-233-11	ELECT 22uF 20% 50V	
C004	1-126-233-11	ELECT 22uF 20% 50V	
C005	1-126-233-11	ELECT 22uF 20% 50V	
C006	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C007	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C008	1-124-126-00	ELECT 47uF 20% 10V	
C009	1-124-126-00	ELECT 47uF 20% 10V	
C010	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C022	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C023	1-124-288-00	ELECT 22uF 20% 10V	
C024	1-124-288-00	ELECT 22uF 20% 10V	
C025	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C026	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C027	1-124-126-00	ELECT 47uF 20% 10V	
C028	1-124-126-00	ELECT 47uF 20% 10V	
C037	1-126-233-11	ELECT 22uF 20% 50V	
C039	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C040	1-124-443-00	ELECT 100uF 20% 10V	
C041	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C042	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C043	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C044	1-124-925-11	ELECT 2.2uF 20% 100V	
C053	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
C054	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
C055	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C056	1-126-233-11	ELECT 22uF 20% 50V	
C057	1-124-443-00	ELECT 100uF 20% 10V	
C058	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C059	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C060	1-124-443-00	ELECT 100uF 20% 10V	
C061	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C062	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	

Ref. No.	Part No.	Description	Remark
C063	1-163-117-00	CERAMIC CHIP (VC, NP, B)	100PF 5% 50V
C064	1-163-117-00	CERAMIC CHIP (VC, NP, B)	100PF 5% 50V
C065	1-163-117-00	CERAMIC CHIP (VC, NP, B)	100PF 5% 50V
C066	1-163-117-00	CERAMIC CHIP (VC, NP, B)	100PF 5% 50V
C067	1-163-117-00	CERAMIC CHIP (VC, NP, B)	100PF 5% 50V
C068	1-163-117-00	CERAMIC CHIP (VC, NP, B)	100PF 5% 50V
C069	1-163-125-00	CERAMIC CHIP (VC, NP, B)	220PF 5% 50V
C070	1-163-125-00	CERAMIC CHIP (VC, NP, B)	220PF 5% 50V
C071	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C072	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C073	1-163-125-00	CERAMIC CHIP (VC, NP, B)	220PF 5% 50V
C074	1-163-125-00	CERAMIC CHIP (VC, NP, B)	220PF 5% 50V
C075	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C076	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C077	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C078	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C079	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C080	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C081	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C082	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C083	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C084	1-163-117-00	CERAMIC CHIP (VC, NP, B)	100PF 5% 50V
C085	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C086	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C087	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C088	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C089	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C090	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C091	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C092	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C093	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C094	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C095	1-126-233-11	ELECT	22uF 20% 50V
C096	1-126-233-11	ELECT	22uF 20% 50V
C097	1-126-233-11	ELECT	22uF 20% 50V
C100	1-126-233-11	ELECT (VC, NP, B)	22uF 20% 50V
C101	1-163-102-00	CERAMIC CHIP (VC, NP, B)	24PF 5% 50V

Ref. No.	Part No.	Description	Remark
C162	1-163-031-11	CERAMIC CHIP (VC, NP, B)	0.01uF 50V
C201	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C202	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C203	1-124-126-00	ELECT	47uF 20% 10V
C204	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C205	1-124-126-00	ELECT	47uF 20% 10V
C206	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C211	1-124-126-00	ELECT	47uF 20% 10V
C212	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C213	1-163-031-11	CERAMIC CHIP (VC, NP, B)	0.01uF 50V
C214	1-163-117-00	CERAMIC CHIP (VC, NP, B)	100PF 5% 50V
C215	1-124-126-00	ELECT (VC, NP, B)	47uF 20% 10V
C216	1-163-117-00	CERAMIC CHIP (VC, NP, B)	100PF 5% 50V
C217	1-163-031-11	CERAMIC CHIP (VC, NP, B)	0.01uF 50V
C218	1-124-126-00	ELECT (VC, NP, B)	47uF 20% 10V
C227	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C228	1-124-126-00	ELECT	47uF 20% 10V
C229	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C230	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C232	1-124-126-00	ELECT	47uF 20% 10V
C233	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C237	1-124-126-00	ELECT	47uF 20% 10V
C239	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C240	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C241	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C244	1-126-233-11	ELECT	22uF 20% 50V
C245	1-126-233-11	ELECT	22uF 20% 50V
C246	1-126-233-11	ELECT (NP, UB)	22uF 20% 50V
C247	1-126-233-11	ELECT (NP, UB)	22uF 20% 50V
C248	1-163-031-11	CERAMIC CHIP (UB)	0.01uF 50V
C249	1-124-126-00	ELECT (NP, UB)	47uF 20% 10V
C249	1-163-031-11	CERAMIC CHIP (NP, UB)	0.01uF 50V
C250	1-163-031-11	CERAMIC CHIP (NP, UB)	0.01uF 50V
C251	1-124-477-11	ELECT (NP, UB)	47uF 20% 25V

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Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
CN001	1-691-084-21	HOUSING, CONNECTOR 25P	
* CN002	1-691-072-11	HOUSING, CONNECTOR 13P	
* CN003	1-564-001-11	PIN, CONNECTOR 2P (VC, NP, B)	
< JACK >			
CN1001	1-561-534-00	SOCKET, PIN 21P (EURO-AV (LINE 1))	
CN1002	1-561-534-00	SOCKET, PIN 21P (CAMEL *) (VC, NP, B)	
< DIODE >			
D001	8-719-801-78	DIODE 1SS184	
D002	8-719-200-27	DIODE E10DS2	
D008	8-719-421-59	DIODE MA3130WA-TX (VC, NP, B)	
D010	8-719-421-59	DIODE MA3130WA-TX (VC, NP, B)	
D011	8-719-421-59	DIODE MA3130WA-TX (VC, NP, B)	
D012	8-719-106-43	DIODE R09.1M-B1 (VC, NP, B)	
D013	8-719-157-23	DIODE R04.7M-B (VC, NP, B)	
D014	8-719-421-59	DIODE MA3130WA-TX (VC, NP, B)	
D015	8-719-421-59	DIODE MA3130WA-TX (VC, NP, B)	
D016	8-719-421-59	DIODE MA3130WA-TX (VC, NP, B)	
D017	8-719-421-59	DIODE MA3130WA-TX (VC, NP, B)	
D018	8-719-106-43	DIODE R09.1M-B1	
D019	8-719-421-59	DIODE MA3130WA-TX	
D020	8-719-421-59	DIODE MA3130WA-TX	
D021	8-719-421-59	DIODE MA3130WA-TX	
D022	8-719-106-43	DIODE R09.1M-B1 (VC, NP, B)	
D023	8-719-157-54	DIODE R012M-B	
D024	8-719-421-59	DIODE MA3130WA-TX	
D025	8-719-421-59	DIODE MA3130WA-TX	
D028	8-719-421-59	DIODE MA3130WA-TX	
D027	8-719-421-59	DIODE MA3130WA-TX	
D028	8-719-106-43	DIODE R09.1M-B1	
< FERRITE BEAD >			
FB009	1-216-295-00	METAL CHIP 0 5K 1/10W	
FB010	1-216-295-00	METAL CHIP 0 5K 1/10W	
FB015	1-216-295-00	METAL CHIP 0 5K 1/10W	
FB017	1-216-295-00	METAL CHIP 0 5K 1/10W (VC, NP, B)	
FB018	1-216-295-00	METAL CHIP 0 5K 1/10W (VC, NP, B)	
FB019	1-216-295-00	METAL CHIP 0 5K 1/10W	
FB020	1-216-295-00	METAL CHIP 0 5K 1/10W (VC, NP, B)	
FB021	1-216-295-00	METAL CHIP 0 5K 1/10W	
FB022	1-216-295-00	METAL CHIP 0 5K 1/10W	
FB023	1-216-295-00	METAL CHIP 0 5K 1/10W	
FB024	1-414-235-11	INDUCTOR, FERRITE BEAD	
FB025	1-414-235-11	INDUCTOR, FERRITE BEAD	

Ref. No.	Part No.	Description	Remark
< IC >			
IC001	8-759-300-71	IC HD140538FP	
IC002	8-759-097-80	IC HD49783FP (VC, NP, B)	
IC003	8-759-300-71	IC HD140538FP	
IC004	8-759-262-03	IC MC145778F-T1	
IC005	8-759-257-97	IC MM1117XFE	
IC201	8-759-924-46	IC BA4560F	
IC202	8-759-300-71	IC HD140538FP	
IC203	8-759-300-71	IC HD140538FP (VC, NP, B)	
IC204	8-759-924-46	IC BA4560F (VC, NP, B)	
IC205	8-759-300-71	IC HD140538FP (VC, NP, B)	
IC206	8-759-924-46	IC BA4560F	
IC207	8-759-924-46	IC BA4560F	
< JUMPER RESISTOR >			
JR001	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR002	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR003	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR004	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR005	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR006	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR007	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR008	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR009	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR010	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR011	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR012	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR013	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR014	1-216-296-00	METAL CHIP 0 5K 1/10W	
JR015	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR018	1-216-295-00	METAL CHIP 0 5K 1/10W	
JR019	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR020	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR022	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR024	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR025	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR030	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR031	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR051	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR052	1-216-295-00	METAL CHIP 0 5K 1/10W	
JR053	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR054	1-216-295-00	METAL CHIP 0 5K 1/10W	
JR056	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR057	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR058	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR074	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR083	1-216-296-00	METAL CHIP 0 5K 1/8W	
JR108	1-216-296-00	METAL CHIP 0 5K 1/8W	

Ref. No.	Part No.	Description	Remark
JR114	1-216-296-00	METAL CHIP	0 5% 1/8W
JR200	1-216-295-00	METAL CHIP	0 5% 1/10W
JR201	1-216-295-00	METAL CHIP	0 5% 1/10W
JR203	1-216-296-00	METAL CHIP	0 5% 1/8W
JR204	1-216-296-00	METAL CHIP	0 5% 1/8W
JR205	1-216-296-00	METAL CHIP	0 5% 1/8W
JR206	1-216-296-00	METAL CHIP	0 5% 1/8W
JR207	1-216-295-00	METAL CHIP	0 5% 1/10W
JR208	1-216-295-00	METAL CHIP	0 5% 1/10W
JR306	1-216-295-00	METAL CHIP	0 5% 1/10W

JR400 1-216-296-00 METAL CHIP 0 5% 1/8W

< COIL >

L014 1-408-417-00 INDUCTOR 47uH
 L160 1-410-389-31 INDUCTOR CHIP 47uH (VC, NP, B)
 L201 1-408-417-00 INDUCTOR 47uH
 L206 1-408-417-00 INDUCTOR 47uH
 L207 1-408-417-00 INDUCTOR 47uH (NP, UB)
 L208 1-408-417-00 INDUCTOR 47uH (NP, UB)

< DECODER BLOCK >

NGM201 1-466-902-11 DECODER BLOCK (CA-395A) (UB)
 NGM201 1-466-903-11 DECODER BLOCK (CA-395A) (NP)

< TRANSISTOR >

Q001 8-729-010-25 TRANSISTOR MSD601-RT1 (VC, NP, B)
 Q002 8-729-010-25 TRANSISTOR MSD601-RT1
 Q004 8-729-010-25 TRANSISTOR MSD601-RT1
 Q005 8-729-010-25 TRANSISTOR MSD601-RT1
 Q006 8-729-421-19 TRANSISTOR UN213 (VC, NP, B)
 Q011 8-729-010-25 TRANSISTOR MSD601-RT1
 Q012 8-729-010-05 TRANSISTOR MSB709-RT1
 Q013 8-729-010-25 TRANSISTOR MSD601-RT1
 Q014 8-729-010-25 TRANSISTOR MSD601-RT1
 Q016 8-729-010-25 TRANSISTOR MSD601-RT1
 Q021 8-729-010-25 TRANSISTOR MSD601-RT1
 Q022 8-729-010-25 TRANSISTOR MSD601-RT1 (VC, NP, B)
 Q023 8-729-010-05 TRANSISTOR MSB709-RT1 (VC, NP, B)
 Q024 8-729-010-25 TRANSISTOR MSD601-RT1 (VC, NP, B)
 Q025 8-729-010-25 TRANSISTOR MSD601-RT1 (VC, NP, B)
 Q026 8-729-424-28 TRANSISTOR UN216 (VC, NP, B)
 Q036 8-729-421-19 TRANSISTOR UN213
 Q037 8-729-424-08 TRANSISTOR UN211
 Q160 8-729-010-05 TRANSISTOR MSB709-RT1 (VC, NP, B)
 Q161 8-729-010-25 TRANSISTOR MSD601-RT1
 Q162 8-729-010-25 TRANSISTOR MSD601-RT1
 Q163 8-729-010-25 TRANSISTOR MSD601-RT1 (VC, NP, B)

Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R001	1-216-065-00	METAL CHIP (VC, NP, B)	4.7K 5% 1/10W
R002	1-216-081-00	METAL CHIP (VC, NP, B)	22K 5% 1/10W
R003	1-216-295-00	METAL CHIP (VC, NP, B)	0 5% 1/10W
R004	1-216-065-00	METAL CHIP (VC, NP, B)	4.7K 5% 1/10W
R005	1-216-059-91	METAL GLAZE	47K 5% 1/10W
R007	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R008	1-216-065-00	METAL CHIP (VC, NP, B)	4.7K 5% 1/10W
R010	1-216-295-00	METAL CHIP (VC, NP, B)	0 5% 1/10W
R011	1-216-065-00	METAL CHIP (VC, NP, B)	4.7K 5% 1/10W
R012	1-216-081-00	METAL CHIP	22K 5% 1/10W
R014	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R015	1-216-081-00	METAL CHIP	22K 5% 1/10W
R017	1-216-073-00	METAL CHIP	10K 5% 1/10W
R021	1-216-295-00	METAL CHIP (VC, NP, B)	0 5% 1/10W
R022	1-216-295-00	METAL CHIP (VC, NP, B)	0 5% 1/10W
R024	1-216-295-00	METAL CHIP (VC, NP, B)	0 5% 1/10W
R027	1-216-295-00	METAL CHIP (VC, NP, B)	0 5% 1/10W
R029	1-216-295-00	METAL CHIP (AE, UB)	0 5% 1/10W
R035	1-216-295-00	METAL CHIP (VC, NP, B)	0 5% 1/10W
R036	1-216-295-00	METAL CHIP	0 5% 1/10W
R037	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R038	1-216-081-00	METAL CHIP	22K 5% 1/10W
R039	1-216-295-00	METAL CHIP	0 5% 1/10W
R040	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R041	1-216-081-00	METAL CHIP	22K 5% 1/10W
R042	1-216-065-00	METAL CHIP (VC, NP, B)	4.7K 5% 1/10W
R043	1-216-081-00	METAL CHIP (VC, NP, B)	22K 5% 1/10W
R045	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R046	1-216-081-00	METAL CHIP	22K 5% 1/10W
R048	1-216-081-00	METAL CHIP	22K 5% 1/10W
R051	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R052	1-216-081-00	METAL CHIP	22K 5% 1/10W
R057	1-216-089-91	METAL GLAZE (VC, NP, B)	47K 5% 1/10W
R058	1-216-569-11	METAL CHIP	39K 0.5% 1/10W
R063	1-216-295-00	METAL CHIP (AE, UB)	0 5% 1/10W

Ref. No.	Part No.	Description	Remark		
R064	1-216-295-00	METAL CHIP (AE, UB)	0	5%	1/10W
R066	1-216-081-00	METAL CHIP (VC, NP, B)	22K	5%	1/10W
R067	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R068	1-216-081-00	METAL CHIP (VC, NP, B)	22K	5%	1/10W
R069	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R070	1-216-295-00	METAL CHIP	0	5%	1/10W
R071	1-216-011-00	METAL CHIP (VC, NP, B)	27	5%	1/10W
R072	1-216-041-00	METAL CHIP (VC, NP, B)	470	5%	1/10W
R073	1-216-025-00	METAL CHIP (VC, NP, B)	100	5%	1/10W
R074	1-216-025-00	METAL CHIP (VC, NP, B)	100	5%	1/10W
R075	1-216-053-00	METAL CHIP (VC, NP, B)	1.5K	5%	1/10W
R076	1-216-121-00	METAL CHIP (VC, NP, B)	1M	5%	1/10W
R077	1-216-101-00	METAL CHIP (VC, NP, B)	150K	5%	1/10W
R078	1-216-109-00	METAL CHIP (VC, NP, B)	330K	5%	1/10W
R079	1-216-065-00	METAL CHIP (VC, NP, B)	4.7K	5%	1/10W
R080	1-216-105-00	METAL CHIP (VC, NP, B)	220K	5%	1/10W
R081	1-216-069-00	METAL CHIP (VC, NP, B)	6.8K	5%	1/10W
R082	1-216-295-00	METAL CHIP	0	5%	1/10W
R085	1-216-295-00	METAL CHIP (AE, UB)	0	5%	1/10W
R086	1-216-295-00	METAL CHIP (AE, UB)	0	5%	1/10W
R082	1-216-025-00	METAL CHIP	100	5%	1/10W
R094	1-216-011-00	METAL CHIP	27	5%	1/10W
R095	1-216-011-00	METAL CHIP	27	5%	1/10W
R096	1-216-043-00	METAL CHIP	590	5%	1/10W
R097	1-216-043-00	METAL CHIP	590	5%	1/10W
R098	1-216-043-00	METAL CHIP	590	5%	1/10W
R099	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R100	1-216-043-00	METAL CHIP	590	5%	1/10W
R101	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R102	1-216-295-00	METAL CHIP	0	5%	1/10W
R103	1-216-295-00	METAL CHIP	0	5%	1/10W
R104	1-216-025-00	METAL CHIP (VC, NP, B)	100	5%	1/10W
R105	1-216-022-00	METAL CHIP (VC, NP, B)	75	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R106	1-216-017-00	METAL CHIP (VC, NP, B)	47	5%	1/10W
R107	1-216-025-00	METAL CHIP (VC, NP, B)	100	5%	1/10W
R108	1-216-295-00	METAL CHIP (VC, NP, B)	0	5%	1/10W
R109	1-216-069-00	METAL CHIP (VC, NP, B)	6.8K	5%	1/10W
R110	1-216-057-00	METAL CHIP (VC, NP, B)	2.2K	5%	1/10W
R111	1-216-041-00	METAL CHIP (VC, NP, B)	470	5%	1/10W
R112	1-216-057-00	METAL CHIP (VC, NP, B)	2.2K	5%	1/10W
R113	1-216-041-00	METAL CHIP (VC, NP, B)	470	5%	1/10W
R115	1-216-295-00	METAL CHIP (VC, NP, B)	0	5%	1/10W
R116	1-216-022-00	METAL CHIP	75	5%	1/10W
R117	1-216-025-00	METAL CHIP	100	5%	1/10W
R118	1-216-017-00	METAL CHIP	47	5%	1/10W
R119	1-216-017-00	METAL CHIP	47	5%	1/10W
R120	1-216-295-00	METAL CHIP (VC, NP, B)	0	5%	1/10W
R121	1-216-041-00	METAL CHIP	470	5%	1/10W
R122	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R123	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R124	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R125	1-216-041-00	METAL CHIP	470	5%	1/10W
R126	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R127	1-216-041-00	METAL CHIP	470	5%	1/10W
R128	1-216-057-00	METAL CHIP (VC, NP, B)	2.2K	5%	1/10W
R129	1-216-041-00	METAL CHIP (VC, NP, B)	470	5%	1/10W
R130	1-216-057-00	METAL CHIP (VC, NP, B)	2.2K	5%	1/10W
R131	1-216-041-00	METAL CHIP (VC, NP, B)	470	5%	1/10W
R132	1-216-022-00	METAL CHIP (VC, NP, B)	75	5%	1/10W
R135	1-216-033-00	METAL CHIP (VC, NP, B)	220	5%	1/10W
R136	1-216-033-00	METAL CHIP (VC, NP, B)	220	5%	1/10W
R137	1-216-033-00	METAL CHIP	220	5%	1/10W
R138	1-216-033-00	METAL CHIP	220	5%	1/10W
R139	1-216-065-00	METAL CHIP (VC, NP, B)	4.7K	5%	1/10W
R141	1-216-049-00	METAL CHIP	1K	5%	1/10W
R142	1-216-041-00	METAL CHIP	470	5%	1/10W
R143	1-216-295-00	METAL CHIP	0	5%	1/10W

Ref. No.	Part No.	Description	Remark
R144	1-216-295-00	METAL CHIP (AE, UB)	0 5% 1/10W
R151	1-216-049-00	METAL CHIP (VC, NP, B)	1K 5% 1/10W
R152	1-216-049-00	METAL CHIP (VC, NP, B)	1K 5% 1/10W
R153	1-216-049-00	METAL CHIP (VC, NP, B)	1K 5% 1/10W
R154	1-216-295-00	METAL CHIP (VC, NP, B)	0 5% 1/10W
R155	1-216-295-00	METAL CHIP (VC, NP, B)	0 5% 1/10W
R157	1-216-295-00	METAL CHIP (VC, NP, B)	0 5% 1/10W
R158	1-216-295-00	METAL CHIP (VC, NP, B)	0 5% 1/10W
R161	1-216-081-00	METAL CHIP	22K 5% 1/10W
R162	1-216-065-00	METAL CHIP (VC, NP, B)	4.7K 5% 1/10W
R163	1-216-065-00	METAL CHIP (VC, NP, B)	4.7K 5% 1/10W
R164	1-216-059-00	METAL CHIP (VC, NP, B)	2.7K 5% 1/10W
R165	1-216-067-00	METAL CHIP (VC, NP, B)	5.6K 5% 1/10W
R166	1-216-295-00	METAL CHIP (VC, NP, B)	0 5% 1/10W
R167	1-216-065-00	METAL CHIP (VC, NP, B)	4.7K 5% 1/10W
R168	1-216-055-00	METAL CHIP (VC, NP, B)	1.8K 5% 1/10W
R169	1-216-295-00	METAL CHIP	0 5% 1/10W
R203	1-216-073-00	METAL CHIP	10K 5% 1/10W
R205	1-216-073-00	METAL CHIP	10K 5% 1/10W
R206	1-216-073-00	METAL CHIP	10K 5% 1/10W
R208	1-216-073-00	METAL CHIP	10K 5% 1/10W
R209	1-216-073-00	METAL CHIP	10K 5% 1/10W
R210	1-216-689-11	METAL CHIP (VC, NP, B)	39K 0.5% 1/10W
R211	1-216-073-00	METAL CHIP	10K 5% 1/10W
R212	1-216-073-00	METAL CHIP (VC, NP, B)	10K 5% 1/10W
R213	1-216-689-11	METAL CHIP (VC, NP, B)	39K 0.5% 1/10W
R214	1-216-073-00	METAL CHIP	10K 5% 1/10W
R217	1-216-295-00	METAL CHIP	0 5% 1/10W
R218	1-216-295-00	METAL CHIP	0 5% 1/10W
R219	1-216-295-00	METAL CHIP (AE, UB)	0 5% 1/10W
R220	1-216-295-00	METAL CHIP (AE, UB)	0 5% 1/10W
R221	1-216-295-00	METAL CHIP (AE, UB)	0 5% 1/10W
R222	1-216-295-00	METAL CHIP (AE, UB)	0 5% 1/10W

Ref. No.	Part No.	Description	Remark
R223	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R224	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R225	1-216-089-91	METAL GLAZE (VC, NP, B)	47K 5% 1/10W
R226	1-216-089-91	METAL GLAZE (VC, NP, B)	47K 5% 1/10W
R227	1-216-041-00	METAL CHIP	470 5% 1/10W
R228	1-216-041-00	METAL CHIP	470 5% 1/10W
R229	1-216-073-00	METAL CHIP	10K 5% 1/10W
R230	1-216-688-11	METAL CHIP	39K 0.5% 1/10W
R231	1-216-073-00	METAL CHIP	10K 5% 1/10W
R232	1-216-073-00	METAL CHIP	10K 5% 1/10W
R233	1-216-688-11	METAL CHIP	39K 0.5% 1/10W
R234	1-216-073-00	METAL CHIP	10K 5% 1/10W
R235	1-216-295-00	METAL CHIP	0 5% 1/10W
R236	1-216-295-00	METAL CHIP	0 5% 1/10W
R237	1-216-081-00	METAL CHIP	22K 5% 1/10W
R238	1-216-085-00	METAL CHIP	33K 5% 1/10W
R239	1-216-073-00	METAL CHIP	10K 5% 1/10W
R240	1-216-081-00	METAL CHIP	22K 5% 1/10W
R241	1-216-085-00	METAL CHIP	33K 5% 1/10W
R242	1-216-073-00	METAL CHIP	10K 5% 1/10W
R243	1-216-071-00	METAL CHIP	8.2K 5% 1/10W
R244	1-216-071-00	METAL CHIP	8.2K 5% 1/10W
R246	1-216-295-00	METAL CHIP	0 5% 1/10W
R247	1-216-295-00	METAL CHIP	0 5% 1/10W
R251	1-216-295-00	METAL CHIP (NP, UB)	0 5% 1/10W
R253	1-216-295-00	METAL CHIP	0 5% 1/10W
R254	1-216-295-00	METAL CHIP (VC, AE, B)	0 5% 1/10W

 * A-7063-932-A DI-51 (G) BOARD, COMPLETE

 (Ref. No. 1,000 series)
 1-751-904-11 CABLE, FLAT (FMD-4)

< CAPACITOR >

C108	1-163-031-11	CERAMIC CHIP	0.01uF	50V
C109	1-163-031-11	CERAMIC CHIP	0.01uF	50V
C114	1-163-031-11	CERAMIC CHIP	0.01uF	50V
C115	1-126-208-11	ELECT CHIP	100uF	20% 6.3V
C116	1-163-031-11	CERAMIC CHIP	0.01uF	50V
C117	1-163-031-11	CERAMIC CHIP	0.01uF	50V
C118	1-126-208-11	ELECT CHIP	100uF	20% 6.3V
C120	1-163-031-11	CERAMIC CHIP	0.01uF	50V
C121	1-163-031-11	CERAMIC CHIP	0.01uF	50V
C122	1-126-208-11	ELECT CHIP	100uF	20% 6.3V
C150	1-124-779-00	ELECT CHIP	10uF	20% 15V

Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description		Remark		
C152	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	C315	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C153	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	C316	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C155	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C317	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C156	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	C318	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C157	1-163-031-11	CERAMIC CHIP	0.01uF		50V	C319	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C158	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C322	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C159	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	C400	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C200	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	C401	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C201	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	C402	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C202	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	C403	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C204	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	C404	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C205	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	C450	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C206	1-163-031-11	CERAMIC CHIP	0.01uF		50V	C451	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C207	1-126-193-11	ELECT	1uF	20%	50V	C452	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C208	1-163-031-11	CERAMIC CHIP	0.01uF		50V	C453	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C209	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C500	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C210	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	C501	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C213	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C502	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C214	1-163-031-11	CERAMIC CHIP	0.01uF		50V	C503	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C215	1-163-031-11	CERAMIC CHIP	0.01uF		50V	C504	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C216	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	C505	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C218	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C507	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C219	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C508	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V
C250	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	C570	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C251	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	C600	1-163-038-00	CERAMIC CHIP	16PF	5%	50V
C252	1-163-031-11	CERAMIC CHIP	0.01uF		50V	C601	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C253	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	C602	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C254	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C603	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C255	1-163-031-11	CERAMIC CHIP	0.01uF		50V	C604	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C256	1-163-031-11	CERAMIC CHIP	0.01uF		50V	C605	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C257	1-163-031-11	CERAMIC CHIP	0.01uF		50V	C607	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C258	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	C608	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C259	1-163-031-11	CERAMIC CHIP	0.01uF		50V	C609	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C262	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	C610	1-163-087-00	CERAMIC CHIP	4PF		50V
C263	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C611	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C265	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C700	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C266	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C701	1-124-778-00	ELECT CHIP	10uF	20%	16V
C300	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C702	1-163-110-00	CERAMIC CHIP	51PF	5%	50V
C301	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C703	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C302	1-163-031-11	CERAMIC CHIP	0.01uF		50V	C704	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C303	1-163-031-11	CERAMIC CHIP	0.01uF		50V	C705	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C304	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	C706	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C305	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C708	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C306	1-126-193-11	ELECT	1uF	20%	50V	C709	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C307	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V	C710	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C308	1-164-232-11	CERAMIC CHIP	0.01uF		50V	C711	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C309	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C712	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C311	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V	C715	1-163-107-00	CERAMIC CHIP	39PF	5%	50V
C312	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C716	1-162-107-00	CERAMIC CHIP	39PF	5%	50V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark	
C750	1-163-038-00	CERAMIC CHIP	0.1uF	25V		< DIODE >		
C751	1-163-031-11	CERAMIC CHIP	0.01uF	50V				
C753	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	D150	8-719-404-46 DIODE NA110	
C754	1-163-031-11	CERAMIC CHIP	0.01uF	50V	D151	8-719-404-46 DIODE NA110		
C755	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	D300	8-719-949-46 DIODE 1T32	
					D301	8-719-404-46 DIODE NA110		
C756	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	D450	8-719-801-78 DIODE 1SS164	
C757	1-163-117-00	CERAMIC CHIP	100PF	5%	50V			
C758	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	D500	8-719-940-45 DIODE DWAD10	
C759	1-216-295-00	METAL CHIP	0 5%	1/10W	D600	8-713-300-68 DIODE 1T33C-01		
C760	1-163-031-11	CERAMIC CHIP	0.01uF	50V	D601	8-719-801-78 DIODE 1SS164		
						< FERRITE BEAD >		
C761	1-163-031-11	CERAMIC CHIP	0.01uF	50V				
C762	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	FB100	1-543-256-11 BEAD, FERRITE	
C763	1-163-038-00	CERAMIC CHIP	0.1uF	25V	FB101	1-543-256-11 BEAD, FERRITE		
C765	1-164-232-11	CERAMIC CHIP	0.01uF	50V	FB103	1-543-256-11 BEAD, FERRITE		
C769	1-163-107-00	CERAMIC CHIP	39PF	5%	50V	FB104	1-543-256-11 BEAD, FERRITE	
					FB401	1-412-390-21 INDUCTOR CHIP 0uH		
C800	1-163-038-00	CERAMIC CHIP	0.1uF	25V				
C801	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	FB402	1-412-390-21 INDUCTOR CHIP 0uH	
C802	1-164-232-11	CERAMIC CHIP	0.01uF	50V	FB403	1-412-390-21 INDUCTOR CHIP 0uH		
C803	1-126-193-11	ELECT	1uF	20%	50V	FB404	1-412-390-21 INDUCTOR CHIP 0uH	
C804	1-164-232-11	CERAMIC CHIP	0.01uF	50V	FB405	1-412-390-21 INDUCTOR CHIP 0uH		
					FB406	1-412-390-21 INDUCTOR CHIP 0uH		
C805	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	FB407	1-412-390-21 INDUCTOR CHIP 0uH	
C806	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V	FB408	1-412-390-21 INDUCTOR CHIP 0uH	
C807	1-126-602-11	ELECT CHIP	3.3uF	20%	50V	FB409	1-412-390-21 INDUCTOR CHIP 0uH	
C808	1-126-193-11	ELECT	1uF	20%	50V	FB451	1-412-390-21 INDUCTOR CHIP 0uH	
C809	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	FB452	1-412-390-21 INDUCTOR CHIP 0uH	
C810	1-163-058-00	CERAMIC CHIP	16PF	5%	50V	FB453	1-412-390-21 INDUCTOR CHIP 0uH	
C812	1-163-058-00	CERAMIC CHIP	0.1uF	25V	FB454	1-412-390-21 INDUCTOR CHIP 0uH		
C813	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	FB501	1-412-390-21 INDUCTOR CHIP 0uH	
C814	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	FB502	1-412-390-21 INDUCTOR CHIP 0uH	
C815	1-163-031-11	CERAMIC CHIP	0.01uF	50V	FB503	1-412-390-21 INDUCTOR CHIP 0uH		
C816	1-163-031-11	CERAMIC CHIP	0.01uF	50V				
C817	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	FB801	1-412-390-21 INDUCTOR CHIP 0uH	
C818	1-163-139-00	CERAMIC CHIP	820PF	5%	50V			
C819	1-163-038-00	CERAMIC CHIP	0.1uF	25V				
C901	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V		< FILTER >	
C902	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	FL100	1-421-927-21 FILTER, NOISE	
C904	1-163-031-11	CERAMIC CHIP	0.01uF	50V				
C905	1-163-125-00	CERAMIC CHIP	220PF	5%	50V		< IC >	
		< CONNECTOR >						
CN100	1-691-064-21	HOUSING, CONNECTOR 25P						
		< VARIABLE CAPACITOR >						
CV300	1-141-422-11	CAP. ADJ				IC100	8-759-157-22 IC PQ05T21U	
CV500	1-141-422-11	CAP. ADJ				IC150	8-759-011-05 IC ME74HC4053P	
CV600	1-141-311-11	CAP. TRIMMER 20PF				IC200	8-752-334-55 IC CXD1175AM	
CV800	1-141-311-11	CAP. TRIMMER 20PF				IC250	8-752-334-55 IC CXD1175AM	
						IC300	8-759-987-17 IC CXD1229Q	
						IC400	8-752-340-52 IC CXX48324Q	
						IC450	8-752-340-75 IC CXX1206AM	
						IC500	8-759-046-43 IC CXD2108AQ	
						IC570	8-759-232-74 IC TC74HC163AF	
						IC600	8-759-987-18 IC CXD1227Q	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC700	8-752-032-55	IC	CXA1106M	Q255	8-729-901-01	TRANSISTOR	D7C144EK
IC750	8-752-032-55	IC	CXA1106M	Q300	8-729-122-63	TRANSISTOR	23A122E-E4
IC800	8-759-987-20	IC	CXD1229Q	Q301	8-729-102-06	TRANSISTOR	25C2223-F14
IC900	8-759-239-55	IC	TC74HC123AF	Q570	8-729-991-01	TRANSISTOR	D7C144EK
IC901	8-759-239-34	IC	TC74HC4538AF	Q571	8-729-991-01	TRANSISTOR	D7C144EK
IC950	8-759-925-85	IC	SN74HC32ANS	Q572	8-729-901-01	TRANSISTOR	D7C144EK
IC951	8-759-925-76	IC	SN74HC08ANS	Q600	8-729-010-25	TRANSISTOR	MSD601-RT1
< COIL >				Q601	8-729-010-25	TRANSISTOR	MSD601-RT1
L100	1-412-062-11	INDUCTOR CHIP	47uH	Q700	8-729-010-25	TRANSISTOR	MSD601-RT1
L101	1-412-062-11	INDUCTOR CHIP	47uH	Q701	8-729-010-25	TRANSISTOR	MSD601-RT1
L200	1-410-388-31	INDUCTOR CHIP	39uH	Q703	8-729-010-25	TRANSISTOR	MSD601-RT1
L201	1-410-389-31	INDUCTOR CHIP	47uH	Q704	8-729-010-25	TRANSISTOR	MSD601-RT1
L250	1-410-388-31	INDUCTOR CHIP	39uH	Q750	8-729-010-05	TRANSISTOR	MSB709-RT1
				Q751	8-729-010-25	TRANSISTOR	MSD601-RT1
L251	1-410-389-31	INDUCTOR CHIP	47uH	Q752	8-729-010-25	TRANSISTOR	MSD601-RT1
L300	1-412-062-11	INDUCTOR CHIP	47uH	Q754	8-729-010-25	TRANSISTOR	MSD601-RT1
L301	1-410-373-31	INDUCTOR CHIP	2.2uH	Q755	8-729-010-25	TRANSISTOR	MSD601-RT1
L400	1-410-389-31	INDUCTOR CHIP	47uH	Q756	8-729-120-28	TRANSISTOR	25C1623-LSL6
L450	1-410-389-31	INDUCTOR CHIP	47uH	Q757	8-729-120-28	TRANSISTOR	25C1623-LSL6
				Q800	8-729-010-05	TRANSISTOR	MSB709-RT1
L500	1-412-062-11	INDUCTOR CHIP	47uH	Q801	8-729-010-05	TRANSISTOR	MSB709-RT1
L600	1-412-062-11	INDUCTOR CHIP	47uH	< RESISTOR >			
L601	1-410-390-11	INDUCTOR CHIP	56uH	R100	1-216-049-00	METAL CHIP	1K 5% 1/10W
L602	1-410-390-11	INDUCTOR CHIP	56uH	R102	1-216-049-00	METAL CHIP	1K 5% 1/10W
L700	1-410-380-31	INDUCTOR CHIP	8.2uH	R103	1-216-041-00	METAL CHIP	470 5% 1/10W
				R104	1-216-041-00	METAL CHIP	470 5% 1/10W
L701	1-410-389-31	INDUCTOR CHIP	15uH	R105	1-216-049-00	METAL CHIP	1K 5% 1/10W
L702	1-410-393-11	INDUCTOR CHIP	100uH				
L750	1-410-389-31	INDUCTOR CHIP	47uH	R106	1-216-049-00	METAL CHIP	1K 5% 1/10W
L751	1-410-382-31	INDUCTOR CHIP	12uH	R110	1-216-080-91	METAL GLAZE	47K 5% 1/10W
L752	1-410-389-31	INDUCTOR CHIP	47uH	R150	1-216-049-00	METAL CHIP	1K 5% 1/10W
L753	1-410-382-31	INDUCTOR CHIP	12uH	R151	1-216-081-00	METAL CHIP	22K 5% 1/10W
L754	1-410-389-31	INDUCTOR CHIP	47uH	R152	1-216-080-91	METAL GLAZE	47K 5% 1/10W
L755	1-410-389-31	INDUCTOR CHIP	47uH				
L800	1-410-377-31	INDUCTOR CHIP	4.7uH	R153	1-216-040-00	METAL GLAZE	430 5% 1/10W
L801	1-412-062-11	INDUCTOR CHIP	47uH	R154	1-216-049-00	METAL CHIP	1K 5% 1/10W
				R155	1-216-077-00	METAL CHIP	15K 5% 1/10W
L802	1-410-656-11	INDUCTOR CHIP	150uH	R156	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
< TRANSISTOR >				R157	1-216-049-00	METAL CHIP	1K 5% 1/10W
Q150	8-729-902-19	TRANSISTOR	XN6501				
Q153	8-729-010-25	TRANSISTOR	MSD601-RT1	R158	1-216-089-91	METAL GLAZE	47K 5% 1/10W
Q154	8-729-010-25	TRANSISTOR	MSD601-RT1	R159	1-216-085-00	METAL CHIP	33K 5% 1/10W
Q155	8-729-010-25	TRANSISTOR	MSD601-RT1	R160	1-216-689-11	METAL CHIP	33K 0.5% 1/10W
Q200	8-729-010-25	TRANSISTOR	MSD601-RT1	R161	1-216-049-00	METAL CHIP	1K 5% 1/10W
				R162	1-216-089-91	METAL GLAZE	47K 5% 1/10W
Q201	8-729-010-25	TRANSISTOR	MSD601-RT1				
Q203	8-729-010-25	TRANSISTOR	MSD601-RT1	R163	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
Q250	8-729-010-25	TRANSISTOR	MSD601-RT1	R164	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
Q251	8-729-010-25	TRANSISTOR	MSD601-RT1	R165	1-216-295-00	METAL CHIP	0 5% 1/10W
Q253	8-729-010-25	TRANSISTOR	MSD601-RT1	R166	1-216-295-00	METAL CHIP	0 5% 1/10W
				R167	1-216-089-91	METAL GLAZE	47K 5% 1/10W
Q254	8-729-010-25	TRANSISTOR	MSD601-RT1				

Ref.No.	Part No.	Description	47K	5%	1/10W	Remark	Ref.No.	Part No.	Description	47K	5%	1/10W	Remark
R168	1-216-089-01	METAL GLAZE	47K	5%	1/10W		R274	1-216-089-01	METAL GLAZE	47K	5%	1/10W	
R169	1-216-049-00	METAL CHIP	1K	5%	1/10W		R301	1-216-295-00	METAL CHIP	0	5%	1/10W	
R171	1-216-089-01	METAL GLAZE	47K	5%	1/10W		R303	1-216-295-00	METAL CHIP	0	5%	1/10W	
R200	1-216-049-00	METAL CHIP	1K	5%	1/10W		R305	1-216-019-00	METAL CHIP	56	5%	1/10W	
R201	1-216-037-00	METAL CHIP	330	5%	1/10W		R306	1-216-019-00	METAL CHIP	56	5%	1/10W	
R203	1-216-049-00	METAL CHIP	1K	5%	1/10W		R307	1-216-019-00	METAL CHIP	56	5%	1/10W	
R204	1-216-073-00	METAL CHIP	10K	5%	1/10W		R308	1-216-019-00	METAL CHIP	56	5%	1/10W	
R205	1-216-041-00	METAL CHIP	470	5%	1/10W		R309	1-216-019-00	METAL CHIP	56	5%	1/10W	
R206	1-216-057-00	METAL CHIP	2.2K	5%	1/10W		R310	1-216-013-00	METAL CHIP	56	5%	1/10W	
R207	1-216-025-00	METAL CHIP	100	5%	1/10W		R311	1-216-019-00	METAL CHIP	56	5%	1/10W	
R208	1-216-075-00	METAL CHIP	12K	5%	1/10W		R312	1-216-019-00	METAL CHIP	56	5%	1/10W	
R209	1-216-073-00	METAL CHIP	10K	5%	1/10W		R313	1-216-019-00	METAL CHIP	56	5%	1/10W	
R211	1-216-081-00	METAL CHIP	22K	5%	1/10W		R314	1-216-019-00	METAL CHIP	56	5%	1/10W	
R212	1-216-049-00	METAL CHIP	1K	5%	1/10W		R315	1-216-019-00	METAL CHIP	56	5%	1/10W	
R213	1-216-025-00	METAL CHIP	100	5%	1/10W		R316	1-216-019-00	METAL CHIP	56	5%	1/10W	
R214	1-216-295-00	METAL CHIP	0	5%	1/10W		R317	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R215	1-216-295-00	METAL CHIP	0	5%	1/10W		R318	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R216	1-216-019-00	METAL CHIP	56	5%	1/10W		R319	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R217	1-216-019-00	METAL CHIP	56	5%	1/10W		R320	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R218	1-216-019-00	METAL CHIP	56	5%	1/10W		R321	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R219	1-216-019-00	METAL CHIP	56	5%	1/10W		R322	1-216-111-00	METAL CHIP	390K	5%	1/10W	
R220	1-216-019-00	METAL CHIP	56	5%	1/10W		R323	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R221	1-216-019-00	METAL CHIP	56	5%	1/10W		R324	1-216-119-00	METAL CHIP	820K	5%	1/10W	
R222	1-216-019-00	METAL CHIP	56	5%	1/10W		R325	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R223	1-216-019-00	METAL CHIP	56	5%	1/10W		R327	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R250	1-216-049-00	METAL CHIP	1K	5%	1/10W		R328	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R251	1-216-049-00	METAL CHIP	1K	5%	1/10W		R329	1-216-295-00	METAL CHIP	0	5%	1/10W	
R252	1-216-073-00	METAL CHIP	10K	5%	1/10W		R330	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R253	1-216-039-00	METAL CHIP	390	5%	1/10W		R331	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R254	1-216-049-00	METAL CHIP	1K	5%	1/10W		R332	1-216-111-00	METAL CHIP	390K	5%	1/10W	
R255	1-216-061-00	METAL CHIP	3.3K	5%	1/10W		R333	1-216-295-00	METAL CHIP	0	5%	1/10W	
R257	1-216-073-00	METAL CHIP	10K	5%	1/10W		R334	1-216-119-00	METAL CHIP	820K	5%	1/10W	
R258	1-216-081-00	METAL CHIP	22K	5%	1/10W		R335	1-216-295-00	METAL CHIP	0	5%	1/10W	
R259	1-216-025-00	METAL CHIP	100	5%	1/10W		R337	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R260	1-216-053-00	METAL CHIP	1.5K	5%	1/10W		R338	1-216-025-00	METAL CHIP	100	5%	1/10W	
R261	1-216-295-00	METAL CHIP	0	5%	1/10W		R339	1-216-013-00	METAL CHIP	33	5%	1/10W	
R262	1-216-073-00	METAL CHIP	10K	5%	1/10W		R340	1-216-041-00	METAL CHIP	470	5%	1/10W	
R263	1-216-073-00	METAL CHIP	10K	5%	1/10W		R341	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R264	1-216-009-00	METAL CHIP	22	5%	1/10W		R342	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R265	1-216-019-00	METAL CHIP	56	5%	1/10W		R400	1-216-019-00	METAL CHIP	56	5%	1/10W	
R266	1-216-019-00	METAL CHIP	56	5%	1/10W		R401	1-216-019-00	METAL CHIP	56	5%	1/10W	
R267	1-216-019-00	METAL CHIP	56	5%	1/10W		R402	1-216-019-00	METAL CHIP	56	5%	1/10W	
R268	1-216-019-00	METAL CHIP	56	5%	1/10W		R403	1-216-019-00	METAL CHIP	56	5%	1/10W	
R269	1-216-019-00	METAL CHIP	56	5%	1/10W		R404	1-216-019-00	METAL CHIP	56	5%	1/10W	
R270	1-216-019-00	METAL CHIP	56	5%	1/10W		R405	1-216-019-00	METAL CHIP	56	5%	1/10W	
R271	1-216-019-00	METAL CHIP	56	5%	1/10W		R406	1-216-019-00	METAL CHIP	56	5%	1/10W	
R272	1-216-019-00	METAL CHIP	56	5%	1/10W		R407	1-216-019-00	METAL CHIP	56	5%	1/10W	
R273	1-216-049-00	METAL CHIP	1K	5%	1/10W		R408	1-216-019-00	METAL CHIP	56	5%	1/10W	
							R413	1-216-019-00	METAL CHIP	56	5%	1/10W	

Ref. No.	Part No.	Description	Remark		
R630	1-216-040-00	METAL CHIP	1K	5%	1/10W
R631	1-216-037-00	METAL CHIP	330	5%	1/10W
R632	1-216-073-00	METAL CHIP	10K	5%	1/10W
R633	1-216-073-00	METAL CHIP	10K	5%	1/10W
R634	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R700	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R701	1-216-025-00	METAL CHIP	100	5%	1/10W
R702	1-216-037-00	METAL CHIP	330	5%	1/10W
R704	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R705	1-216-041-00	METAL CHIP	470	5%	1/10W
R706	1-216-073-00	METAL CHIP	10K	5%	1/10W
R707	1-216-081-00	METAL CHIP	22K	5%	1/10W
R708	1-216-041-00	METAL CHIP	470	5%	1/10W
R709	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R710	1-216-035-00	METAL CHIP	270	5%	1/10W
R711	1-216-041-00	METAL CHIP	470	5%	1/10W
R712	1-216-025-00	METAL CHIP	100	5%	1/10W
R713	1-216-295-00	METAL CHIP	0	5%	1/10W
R714	1-216-295-00	METAL CHIP	0	5%	1/10W
R715	1-216-295-00	METAL CHIP	0	5%	1/10W
R716	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R717	1-216-073-00	METAL CHIP	10K	5%	1/10W
R719	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R750	1-216-049-00	METAL CHIP	1K	5%	1/10W
R751	1-216-049-00	METAL CHIP	1K	5%	1/10W
R752	1-216-049-00	METAL CHIP	1K	5%	1/10W
R753	1-216-049-00	METAL CHIP	1K	5%	1/10W
R755	1-216-085-00	METAL CHIP	33K	5%	1/10W
R756	1-216-077-00	METAL CHIP	15K	5%	1/10W
R758	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R759	1-216-041-00	METAL CHIP	470	5%	1/10W
R760	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R761	1-216-041-00	METAL CHIP	470	5%	1/10W
R762	1-216-049-00	METAL CHIP	1K	5%	1/10W
R764	1-216-295-00	METAL CHIP	0	5%	1/10W
R765	1-216-295-00	METAL CHIP	0	5%	1/10W
R766	1-216-031-00	METAL CHIP	100	5%	1/10W
R767	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R768	1-216-037-00	METAL CHIP	330	5%	1/10W
R769	1-216-033-00	METAL CHIP	220	5%	1/10W
R770	1-216-073-00	METAL CHIP	10K	5%	1/10W
R772	1-216-045-00	METAL CHIP	680	5%	1/10W
R775	1-216-045-00	METAL CHIP	1K	5%	1/10W
R776	1-216-049-00	METAL CHIP	1K	5%	1/10W
R777	1-216-049-00	METAL CHIP	1K	5%	1/10W
R800	1-216-073-00	METAL CHIP	10K	5%	1/10W
R801	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R802	1-216-019-00	METAL CHIP	56	5%	1/10W
R803	1-216-049-00	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R804	1-216-049-00	METAL CHIP	1K	5%	1/10W
R805	1-216-021-00	METAL CHIP	68	5%	1/10W
R806	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R807	1-216-117-00	METAL CHIP	680K	5%	1/10W
R809	1-216-055-00	METAL CHIP	33K	5%	1/10W
R810	1-216-085-00	METAL CHIP	33K	5%	1/10W
R811	1-216-085-00	METAL CHIP	33K	5%	1/10W
R812	1-216-073-00	METAL CHIP	10K	5%	1/10W
R813	1-216-085-00	METAL CHIP	33K	5%	1/10W
R814	1-216-049-00	METAL CHIP	1K	5%	1/10W
R817	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R818	1-216-295-00	METAL CHIP	0	5%	1/10W
R819	1-216-295-00	METAL CHIP	0	5%	1/10W
R821	1-216-295-00	METAL CHIP	0	5%	1/10W
R824	1-216-295-00	METAL CHIP	0	5%	1/10W
R825	1-216-049-00	METAL CHIP	1K	5%	1/10W
R826	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R827	1-216-041-00	METAL CHIP	470	5%	1/10W
R900	1-216-295-00	METAL CHIP	0	5%	1/10W
R902	1-216-075-00	METAL CHIP	12K	5%	1/10W
R904	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R905	1-216-075-00	METAL CHIP	12K	5%	1/10W
R907	1-216-073-00	METAL CHIP	10K	5%	1/10W

< VARIABLE RESISTOR >

R9200 1-230-866-11 RES. ADJ. METAL 470
R9700 1-230-866-11 RES. ADJ. METAL 470

< VIBRATOR >

X300 1-567-344-21 VIBRATOR, CRYSTAL (17.73MHz)
X500 1-577-704-11 VIBRATOR, CRYSTAL (14.22MHz)
X600 1-567-733-11 VIBRATOR, CRYSTAL (17.73MHz)

Ref. No.	Part No.	Description	Remark
* A-7063-935-A FJ-13 (C) BOARD, COMPLETE			

(Ref. No. 6,000 series)			
1-751-802-11 CABLE, FLAT (FHF-9)			
< CAPACITOR >			
C201	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C202	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C203	1-126-157-11	ELECT 10uF	20% 16V
C204	1-126-157-11	ELECT 10uF	20% 16V
C205	1-126-157-11	ELECT 10uF	20% 16V
C207	1-126-157-11	ELECT 10uF	20% 16V
C211	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
C212	1-126-157-11	ELECT 10uF	20% 16V
C213	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
C214	1-163-095-11	CERAMIC CHIP 0.001uF	10% 50V
C215	1-126-157-11	ELECT 10uF	20% 16V
C216	1-126-180-11	ELECT 1uF	20% 50V
C218	1-163-937-11	CERAMIC CHIP 0.022uF	10% 25V
C220	1-126-180-11	ELECT 1uF	20% 50V
C221	1-163-937-11	CERAMIC CHIP 0.022uF	10% 25V
C223	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C225	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C224	1-163-095-11	CERAMIC CHIP 0.001uF	10% 50V
C226	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C250	1-124-778-00	ELECT 10uF	20% 16V
< CONNECTOR >			
CN201	1-569-930-11	HOUSING, CONNECTOR 13P	
< DIODE >			
D203	8-719-420-14	DIODE, MA8082-M	
D206	8-719-420-14	DIODE, MA8082-M	
< IC >			
IC201	8-750-771-82	IC NJM4580E	
IC202	8-758-924-46	IC BA4560F	
< JACK >			
J202	1-507-833-00	JACK (PHONES)	
J203	1-764-136-11	JACK (MIC)	
< JUMPER RESISTOR >			
JR201	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR202	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR203	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR204	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR206	1-216-296-00	METAL CHIP 0 5% 1/8W	

Ref. No.	Part No.	Description	Remark
JR207	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR208	1-216-295-00	METAL CHIP 0 5% 1/10W	
< TRANSISTOR >			
Q201	8-729-010-25	TRANSISTOR MSD601-RT1	
Q202	8-729-010-25	TRANSISTOR MSD601-RT1	
Q203	8-729-010-25	TRANSISTOR MSD601-RT1	
Q250	8-729-010-25	TRANSISTOR MSD601-RT1	
< RESISTOR >			
R203	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R204	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R205	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R206	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R207	1-216-166-00	METAL GLAZE 47 5% 1/8W	
R208	1-216-017-00	METAL CHIP 47 5% 1/10W	
R209	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R210	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R211	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R212	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R213	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R214	1-216-085-00	METAL CHIP 4.7K 5% 1/10W	
R215	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R216	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R217	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R218	1-216-025-00	METAL CHIP 100 5% 1/10W	
R219	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R220	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R221	1-216-061-00	METAL CHIP 22K 5% 1/10W	
R222	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R223	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R224	1-216-295-00	METAL CHIP 0 5% 1/10W	
R228	1-216-266-00	METAL CHIP 0 5% 1/8W	
R230	1-216-266-00	METAL CHIP 0 5% 1/8W	
R240	1-216-228-00	METAL GLAZE 18K 5% 1/8W	
R241	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R250	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R251	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R252	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R253	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R260	1-216-019-00	METAL CHIP 56 5% 1/10W	
R261	1-216-019-00	METAL CHIP 56 5% 1/10W	
< VARIABLE RESISTOR >			
RV201	1-223-525-11	RES. VAR. CARBON 10K/10K	

Ref. No.	Part No.	Description	Remark
*	A-7063-933-A	FL-57 (G) BOARD, COMPLETE	

		(Ref. No 6,000 series)	

*	3-947-530-01	HOLDER, TERMINAL, S	
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< CAPACITOR >

C103	1-126-157-11	ELECT	10uF	20%	18V
C104	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C105	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C107	1-126-157-11	ELECT	10uF	20%	18V
C108	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C109	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C110	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C111	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C112	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C113	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C115	1-194-232-11	CERAMIC CHIP	0.01uF		50V
C118	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C156	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C158	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C159	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C175	1-163-038-00	CERAMIC CHIP	0.1uF		25V

< CONNECTOR >

* CN101	1-691-074-11	HOUSING, CONNECTOR 15P	
CN102	1-569-340-11	CONNECTOR, BOARD TO BOARD 11P	

< DIODE >

D102	8-719-421-59	DIODE	MA3130WA-TX
D104	8-719-421-59	DIODE	MA3130WA-TX
D106	8-719-104-34	DIODE	1S2836
D107	8-719-421-59	DIODE	MA3130WA-TX
D109	8-719-421-59	DIODE	MA3130WA-TX
D110	8-719-420-14	DIODE	MA8082-M
D112	8-719-421-59	DIODE	MA3130WA-TX
D125	8-719-025-62	DIODE	SML1215W
D126	8-719-025-62	DIODE	SML1215W
D151	8-719-420-14	DIODE	MA8082-M
D152	8-719-420-14	DIODE	MA8082-M
D153	8-719-420-14	DIODE	MA8082-M
D155	8-719-420-14	DIODE	MA8082-M

< IC >

IC101	8-756-924-46	IC	BA4580F
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Ref. No.	Part No.	Description	Remark
		< JACK >	

J101	1-566-850-51	CONNECTOR, (S) TERMINAL 4P (LINE 1N 2)	
J102	1-695-920-21	JACK, ULTRA MINIATURE 1P (LANC)	
J103	1-764-149-11	JACK, PIN 3P (LINE 1N 2)	

< JUMPER RESISTOR >

JR100	1-216-256-00	METAL CHIP	0	5%	1/8W
JR101	1-216-255-00	METAL CHIP	0	5%	1/10W
JR102	1-216-255-00	METAL CHIP	0	5%	1/10W
JR103	1-216-255-00	METAL CHIP	0	5%	1/10W
JR104	1-216-256-00	METAL CHIP	0	5%	1/8W
JR105	1-216-256-00	METAL CHIP	0	5%	1/8W
JR106	1-216-256-00	METAL CHIP	0	5%	1/8W
JR107	1-216-255-00	METAL CHIP	0	5%	1/10W
JR109	1-216-255-00	METAL CHIP	0	5%	1/10W
JR110	1-216-256-00	METAL CHIP	0	5%	1/8W
JR111	1-216-255-00	METAL CHIP	0	5%	1/10W
JR112	1-216-256-00	METAL CHIP	0	5%	1/8W
JR113	1-216-256-00	METAL CHIP	0	5%	1/8W

< TRANSISTOR >

Q103	8-729-901-06	TRANSISTOR	DTA144EX
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< RESISTOR >

R102	1-216-097-00	METAL CHIP	100K	5%	1/10W
R105	1-216-001-00	METAL CHIP	10	5%	1/10W
R107	1-216-105-00	METAL CHIP	220K	5%	1/10W
R109	1-216-105-00	METAL CHIP	220K	5%	1/10W
R110	1-216-105-00	METAL CHIP	220K	5%	1/10W
R111	1-216-105-00	METAL CHIP	220K	5%	1/10W
R112	1-216-073-00	METAL CHIP	10K	5%	1/10W
R113	1-216-073-00	METAL CHIP	10K	5%	1/10W
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W
R115	1-216-015-00	METAL CHIP	39	5%	1/10W
R116	1-216-015-00	METAL CHIP	39	5%	1/10W
R117	1-216-105-00	METAL CHIP	220K	5%	1/10W
R118	1-216-015-00	METAL CHIP	39	5%	1/10W
R119	1-216-015-00	METAL CHIP	39	5%	1/10W
R120	1-216-015-00	METAL CHIP	39	5%	1/10W
R121	1-216-015-00	METAL CHIP	39	5%	1/10W
R122	1-216-031-00	METAL CHIP	180	5%	1/10W
R123	1-216-029-00	METAL CHIP	150	5%	1/10W
R139	1-216-255-00	METAL CHIP	0	5%	1/10W
R140	1-216-255-00	METAL CHIP	0	5%	1/10W
R150	1-216-255-00	METAL CHIP	0	5%	1/10W
R160	1-216-031-00	METAL CHIP	180	5%	1/10W
R161	1-216-029-00	METAL CHIP	150	5%	1/10W
R179	1-216-255-00	METAL CHIP	0	5%	1/10W

FL-57

FM-16

Ref. No.	Part No.	Description	Remark		
R180	1-216-295-00	METAL CHIP	0	5%	1/10W
R181	1-216-295-00	METAL CHIP	0	5%	1/8W
R182	1-216-295-00	METAL CHIP	0	5%	1/10W
R183	1-216-049-00	METAL CHIP	1K	5%	1/10W
R184	1-216-049-00	METAL CHIP	1K	5%	1/10W

< SWITCH >

S101	1-571-977-11	SWITCH TACTIL (POWER)
S102	1-571-977-11	SWITCH TACTIL (RESET SW)
S103	1-571-977-11	SWITCH TACTIL (OPEN/CLOSE)

+	A-7053-938-A	FM-16 (G) BOARD, COMPLETE

		(Ref. No. 7,000 series)

- 1-751-609-11 CABLE, FLAT (FMF-5)
- 3-831-441-11 CUSHION, CABINET (UPPER)
- 3-955-927-01 CASE (MAIN), SHIELD, DO
- 3-955-955-01 HOLDER, INDICATION TUBE

< CAPACITOR >

C101	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C103	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C104	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C106	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C107	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C108	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C109	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C111	1-126-157-11	ELECT	10uF	20%	16V
C117	1-124-638-11	ELECT	22uF	20%	10V
C118	1-124-638-11	ELECT	22uF	20%	10V
C121	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C122	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C123	1-126-154-11	ELECT	47uF	20%	6.3V
C124	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C125	1-126-157-11	ELECT	10uF	20%	16V
C126	1-126-157-11	ELECT	10uF	20%	16V
C201	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C202	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C203	1-127-531-11	ELECT (SOLID)	33uF	20%	16V
C204	1-126-373-11	ELECT	470uF	20%	10V
C205	1-126-803-11	ELECT	47uF	20%	50V
C206	1-124-510-11	ELECT	220uF	20%	35V
C207	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C208	1-124-667-11	ELECT	10uF	20%	100V
C209	1-163-038-00	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description	Remark
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< CONNECTOR >

- * CN101 1-565-854-11 CONNECTOR, F.P.C 25P
- * CN102 1-565-854-11 CONNECTOR, F.P.C 25P
- * CN103 1-563-602-11 CONNECTOR, FLEXIBLE 25P

< TRIMMER >

CT101	1-141-227-00	CAP, TRIMMER 20PF
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< DIODE >

D201	8-719-901-83	DIODE 1SS83
D202	8-719-901-83	DIODE 1SS83
D203	8-719-105-38	DIODE RD3.0W-B1
D204	8-719-420-48	DIODE MA701A

< IC >

IC101	8-759-252-48	IC MB85096PF-G
IC102	8-759-942-05	IC BA8500AFV
IC103	8-759-183-18	IC CAT93C56K-LE10
IC104	8-759-183-20	IC PST5720MT-T2
IC105	8-759-518-38	IC PST5720MT

IC201	8-759-979-50	IC FA7610N
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< COIL >

L101	1-408-982-11	INDUCTOR 100uH
L102	1-408-982-11	INDUCTOR 100uH
L203	1-410-794-11	INDUCTOR 330uH

< FLUORESCENT INDICATOR >

ND101	1-517-188-11	INDICATOR TUBE, FLUORESCENT
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< TRANSISTOR >

Q102	8-729-424-56	TRANSISTOR UN211L
Q103	8-729-424-56	TRANSISTOR UN211L
Q201	8-729-823-29	TRANSISTOR 2SD1805A-F

< RESISTOR >

R101	1-216-295-00	METAL CHIP	0	5%	1/10W
R102	1-410-957-31	INDUCTOR CHIP 2.2uH			
R103	1-216-049-00	METAL CHIP	1K	5%	1/10W
R104	1-216-049-00	METAL CHIP	1K	5%	1/10W
R105	1-216-049-00	METAL CHIP	1K	5%	1/10W
R106	1-216-037-00	METAL CHIP	330	5%	1/10W
R107	1-216-037-00	METAL CHIP	330	5%	1/10W
R108	1-216-037-00	METAL CHIP	330	5%	1/10W
R109	1-216-049-00	METAL CHIP	1K	5%	1/10W
R110	1-216-037-00	METAL CHIP	330	5%	1/10W
R111	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R112	1-216-037-00	METAL CHIP	330 5% 1/10W	R168	1-216-097-00	METAL CHIP	100K 5% 1/10W
R113	1-216-295-00	METAL CHIP	0 5% 1/10W	R169	1-216-097-00	METAL CHIP	100K 5% 1/10W
R114	1-414-235-11	INDUCTOR, FERRITE BEAD		R170	1-216-097-00	METAL CHIP	100K 5% 1/10W
R115	1-216-037-00	METAL CHIP	330 5% 1/10W	R171	1-216-097-00	METAL CHIP	100K 5% 1/10W
R116	1-216-049-00	METAL CHIP	1K 5% 1/10W	R172	1-216-097-00	METAL CHIP	100K 5% 1/10W
R118	1-216-295-00	METAL CHIP	0 5% 1/10W	R173	1-216-097-00	METAL CHIP	100K 5% 1/10W
R119	1-216-037-00	METAL CHIP	330 5% 1/10W	R174	1-216-097-00	METAL CHIP	100K 5% 1/10W
R120	1-216-037-00	METAL CHIP	330 5% 1/10W	R175	1-216-097-00	METAL CHIP	100K 5% 1/10W
R121	1-216-037-00	METAL CHIP	330 5% 1/10W	R176	1-216-097-00	METAL CHIP	100K 5% 1/10W
R122	1-216-037-00	METAL CHIP	330 5% 1/10W	R177	1-216-097-00	METAL CHIP	100K 5% 1/10W
R123	1-216-037-00	METAL CHIP	330 5% 1/10W	R178	1-216-097-00	METAL CHIP	100K 5% 1/10W
R124	1-216-049-00	METAL CHIP	1K 5% 1/10W	R179	1-216-097-00	METAL CHIP	100K 5% 1/10W
R125	1-216-037-00	METAL CHIP	330 5% 1/10W	R180	1-216-097-00	METAL CHIP	100K 5% 1/10W
R126	1-414-235-11	INDUCTOR, FERRITE BEAD		R181	1-216-097-00	METAL CHIP	100K 5% 1/10W
R127	1-216-037-00	METAL CHIP	330 5% 1/10W	R182	1-216-097-00	METAL CHIP	100K 5% 1/10W
R128	1-216-073-00	METAL CHIP	10K 5% 1/10W	R183	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R129	1-216-049-00	METAL CHIP	1K 5% 1/10W	R184	1-216-037-00	METAL CHIP	330 5% 1/10W
R130	1-216-295-00	METAL CHIP	0 5% 1/10W	R185	1-216-049-00	METAL CHIP	1K 5% 1/10W
R131	1-414-235-11	INDUCTOR, FERRITE BEAD		R186	1-216-049-00	METAL CHIP	1K 5% 1/10W
R132	1-216-037-00	METAL CHIP	330 5% 1/10W	R188	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R133	1-216-037-00	METAL CHIP	330 5% 1/10W	R189	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R134	1-216-037-00	METAL CHIP	330 5% 1/10W	R190	1-216-295-00	METAL CHIP	0 5% 1/10W
R135	1-216-049-00	METAL CHIP	1K 5% 1/10W	R191	1-216-049-00	METAL CHIP	1K 5% 1/10W
R137	1-216-049-00	METAL CHIP	1K 5% 1/10W	R192	1-216-073-00	METAL CHIP	10K 5% 1/10W
R138	1-216-073-00	METAL CHIP	10K 5% 1/10W	R194	1-216-049-00	METAL CHIP	1K 5% 1/10W
R139	1-216-037-00	METAL CHIP	330 5% 1/10W	R195	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R140	1-216-037-00	METAL CHIP	330 5% 1/10W	R196	1-216-037-00	METAL CHIP	330 5% 1/10W
R142	1-216-037-00	METAL CHIP	330 5% 1/10W	R197	1-216-295-00	METAL CHIP	0 5% 1/10W
R143	1-216-097-00	METAL CHIP	100K 5% 1/10W	R199	1-216-295-00	METAL CHIP	0 5% 1/10W
R144	1-216-037-00	METAL CHIP	330 5% 1/10W	R201	1-218-182-11	FUSIBLE	3.3 5% 1/4W F
R145	1-216-073-00	METAL CHIP	10K 5% 1/10W	R202	1-216-103-91	METAL GLAZE	180K 5% 1/10W
R146	1-216-115-00	METAL CHIP	560K 5% 1/10W	R203	1-218-117-00	METAL CHIP	680K 5% 1/10W
R147	1-216-295-00	METAL CHIP	0 5% 1/10W	R204	1-216-076-00	METAL CHIP	13K 5% 1/10W
R149	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R205	1-218-105-00	METAL CHIP	220K 5% 1/10W
R152	1-216-097-00	METAL CHIP	100K 5% 1/10W	R206	1-216-671-11	METAL CHIP	6.8K 0.5% 1/10W
R153	1-216-097-00	METAL CHIP	100K 5% 1/10W	R207	1-216-649-11	METAL CHIP	820 0.5% 1/10W
R154	1-216-097-00	METAL CHIP	100K 5% 1/10W	R208	1-216-693-11	METAL CHIP	56K 0.5% 1/10W
R155	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	R209	1-216-668-11	METAL CHIP	5.6K 0.5% 1/10W
R157	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R211	1-216-073-00	METAL CHIP	10K 5% 1/10W
R158	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R212	1-216-295-00	METAL CHIP	0 5% 1/10W
R159	1-216-035-00	METAL CHIP	270 5% 1/10W	R250	1-216-295-00	METAL CHIP	0 5% 1/10W
R160	1-216-049-00	METAL CHIP	1K 5% 1/10W	R251	1-216-295-00	METAL CHIP	0 5% 1/10W
R161	1-216-035-00	METAL CHIP	270 5% 1/10W	< SWITCH >			
R162	1-216-049-00	METAL CHIP	1K 5% 1/10W				
R163	1-216-049-00	METAL CHIP	1K 5% 1/10W	S101	1-572-561-11	SWITCH, SLIDE (REMOCOM MODE)	
R164	1-216-049-00	METAL CHIP	1K 5% 1/10W	< TRANSFORMER >			
R165	1-216-097-00	METAL CHIP	100K 5% 1/10W				
R166	1-216-097-00	METAL CHIP	100K 5% 1/10W				
R167	1-216-097-00	METAL CHIP	100K 5% 1/10W	T201	1-423-845-11	TRANSFORMER, CONVERTER	

Ref. No.	Part No.	Description	Remark
< VIBRATOR >			
X101	1-567-089-31	VIBRATOR, CRYSTAL (32kHz)	
X102	1-578-126-11	VIBRATOR, CERAMIC (10MHz)	

*	A-7063-934-A	FR-82 (G) BOARD, COMPLETE	

(Ref. No 5, 000 series)			
	3-955-837-01	ILLUMINATOR	
*	3-955-938-01	PLATE, GROUND, LCD	
*	3-955-930-01	PLATE, LIGHT GUIDE, LCD	
*	3-955-931-01	HOLDER, LCD	
< CAPACITOR >			
C301	1-126-157-11	ELECT 10uF 20% 16V	
C302	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C303	1-124-589-11	ELECT 47uF 20% 16V	
C304	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C310	1-163-007-11	CERAMIC CHIP 880PF 10% 50V	
< CONNECTOR >			
CN301	1-563-624-11	HOUSING, CONNECTOR 21P	
CN302	1-569-337-11	CONNECTOR, BOARD TO BOARD 11P	
< DIODE >			
D301	8-719-920-05	LED SLP281C-50 (H18)	
D302	8-719-812-31	LED TLR123 (REC)	
D303	8-719-812-31	LED TLR123 (TIMER REC)	
D304	8-719-812-32	LED TLY123 (VOICE 600ST)	
D305	8-719-812-32	LED TLY123 (VPS)	
D307	8-719-920-05	LED SLP281C-50 (CASSETTE)	
D320	8-719-800-76	DIODE 1SS225	
< IC >			
IC301	8-741-100-61	IC SRX1617-51	
IC302	8-759-171-25	IC LC7562E	
< JUMPER RESISTOR >			
JR301	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR302	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR303	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR304	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR305	1-216-296-00	METAL CHIP 0 5% 1/10W	
JR306	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR307	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR308	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR309	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR310	1-216-295-00	METAL CHIP 0 5% 1/10W	

Ref. No.	Part No.	Description	Remark
JR311	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR312	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR313	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR314	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR315	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR316	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR317	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR318	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR319	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR320	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR321	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR322	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR323	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR324	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR325	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR326	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR327	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR328	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR329	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR330	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR331	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR332	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR333	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR334	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR335	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR336	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR337	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR338	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR339	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR341	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR343	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR344	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR345	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR346	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR347	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR348	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR349	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR350	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR351	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR352	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR353	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR354	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR355	1-216-296-00	METAL CHIP 0 5% 1/8W	

< LIQUID CRYSTAL DISPLAY >

LCD301 1-810-324-21 DISPLAY PANEL, LIQUID CRYSTAL

Ref. No.	Part No.	Description	Remark
< PILOT LAMP >			
PL301	1-517-243-11	LAMP, PILOT	
PL302	1-517-243-11	LAMP, PILOT	
< TRANSISTOR >			
Q303	8-729-421-19	TRANSISTOR UN2213	
Q304	8-729-421-19	TRANSISTOR UN2213	
Q305	8-729-421-19	TRANSISTOR UN2213	
Q307	8-729-421-19	TRANSISTOR UN2213	
Q321	8-729-420-74	TRANSISTOR 2SD1328-RST	
< RESISTOR >			
R301	1-216-031-00	METAL CHIP 180 5% 1/10W	
R302	1-216-031-00	METAL CHIP 180 5% 1/10W	
R303	1-216-031-00	METAL CHIP 180 5% 1/10W	
R304	1-216-031-00	METAL CHIP 180 5% 1/10W	
R305	1-216-031-00	METAL CHIP 180 5% 1/10W	
R306	1-216-336-11	METAL CHIP 47K 1% 1/10W	
R307	1-216-031-00	METAL CHIP 180 5% 1/10W	
R308	1-216-033-00	METAL CHIP 220 5% 1/10W	
R310	1-216-336-11	METAL CHIP 47K 1% 1/10W	
R311	1-216-336-11	METAL CHIP 47K 1% 1/10W	
R312	1-216-295-00	METAL CHIP 0 5% 1/10W	
R315	1-216-295-00	METAL CHIP 0 5% 1/10W	
R320	1-216-043-00	METAL CHIP 560 5% 1/10W	
R321	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R322	1-216-295-00	METAL CHIP 0 5% 1/2W	
R323	1-216-236-00	METAL CHIP 0 5% 1/2W	
R330	1-216-295-00	METAL CHIP 0 5% 1/10W	
R350	1-216-295-00	METAL CHIP 0 5% 1/10W	
< SWITCH >			
S301	1-571-977-11	SWITCH, TACTIL (EJECT)	

Ref. No.	Part No.	Description	Remark
* A-7063-927-A MA-173 (G) BOARD, COMPLETE (VC) * A-7063-993-A MA-173 (F) BOARD, COMPLETE (B) * A-7063-996-A MA-173 (O) BOARD, COMPLETE (UB) * A-7068-002-A MA-173 (N) BOARD, COMPLETE (NP) * A-7068-015-A MA-173 (I) BOARD, COMPLETE (AE)			

(Ref. No. 3,000 series)			
1-751-905-11 CABLE, FLAT (FNF-6)			
< CAPACITOR >			
C001	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C003	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C004	1-124-477-11	ELECT 47uF 20% 25V	
C005	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
C006	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
C007	1-163-229-11	CERAMIC CHIP 12PF 5% 50V	
C008	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C009	1-163-095-00	CERAMIC CHIP 12PF 5% 50V	
C010	1-163-095-00	CERAMIC CHIP 12PF 5% 50V	
C011	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C012	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C013	1-124-472-11	ELECT 470uF 20% 10V	
C014	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C016	1-124-471-00	ELECT 1000uF 20% 6.3V	
C018	1-126-157-11	ELECT 10uF 20% 16V	
C019	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C020	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	
C021	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C022	1-126-157-11	ELECT 10uF 20% 16V	
C023	1-124-471-00	ELECT 1000uF 20% 6.3V	
C024	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C025	1-125-507-11	CAP, DOUBLE LAYERS 0.22F	
C026	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	
C027	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C029	1-164-488-11	CERAMIC CHIP 0.22uF 10% 16V	
C030	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C031	1-164-488-11	CERAMIC CHIP 0.22uF 10% 16V	
C032	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C033	1-164-488-11	CERAMIC CHIP 0.22uF 10% 16V	
C034	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C035	1-162-587-11	CERAMIC CHIP 0.039uF 10% 25V	
C036	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C037	1-164-488-11	CERAMIC CHIP 0.22uF 10% 16V	
C038	1-164-488-11	CERAMIC CHIP 0.22uF 10% 16V	
C039	1-163-237-11	CERAMIC CHIP 27PF 5% 50V	
C040	1-124-257-00	ELECT 2.2uF 20% 50V	
C041	1-126-157-11	ELECT 10uF 20% 16V	
C042	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C043	1-163-031-11	CERAMIC CHIP 0.01uF 50V	

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Ref. No.	Part No.	Description	Remark
C044	1-163-036-00	CERAMIC CHIP	0.1uF 25V
C045	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C046	1-126-157-11	ELECT	10uF 20% 16V
C048	1-163-087-00	CERAMIC CHIP	4PF 50V
C049	1-163-808-11	CERAMIC CHIP	0.047uF 10% 25V
C050	1-126-157-11	ELECT	10uF 20% 16V
C051	1-163-236-11	CERAMIC CHIP	33PF 5% 50V
C052	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
C053	1-126-157-11	ELECT	10uF 20% 16V
C054	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C055	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C056	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C057	1-163-011-11	CERAMIC CHIP	0.0015uF 10% 50V
C058	1-163-101-00	CERAMIC CHIP	22PF 5% 50V
C060	1-163-011-11	CERAMIC CHIP	0.0015uF 10% 50V
C061	1-163-008-11	CERAMIC CHIP	0.001uF 10% 50V
C062	1-163-008-11	CERAMIC CHIP	0.001uF 10% 50V
C063	1-163-101-00	CERAMIC CHIP	22PF 5% 50V
C064	1-163-011-11	CERAMIC CHIP	0.0015uF 10% 50V
C066	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C067	1-124-588-11	ELECT	47uF 20% 16V
C069	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C070	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
C071	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
C072	1-163-809-11	CERAMIC CHIP	0.047uF 10% 25V
C078	1-126-157-11	ELECT	10uF 20% 16V
C081	1-126-157-11	ELECT	10uF 20% 16V
C082	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C083	1-163-008-11	CERAMIC CHIP	0.001uF 10% 50V
C084	1-163-008-11	CERAMIC CHIP	0.001uF 10% 50V
C085	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C086	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C088	1-126-157-11	ELECT	10uF 20% 16V
C090	1-126-157-11	ELECT	10uF 20% 16V
C092	1-163-103-00	CERAMIC CHIP	27PF 5% 50V
C093	1-163-103-00	CERAMIC CHIP	27PF 5% 50V
C095	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C096	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C097	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V
C098	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V
C302	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C303	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C304	1-124-638-11	ELECT	22uF 20% 10V
C305	1-124-589-11	ELECT	47uF 20% 16V
C306	1-127-530-11	ELECT(SOLID)	22uF 20% 20V
C307	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C308	1-163-257-11	CERAMIC CHIP	180PF 5% 50V
C309	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C311	1-163-077-00	CERAMIC CHIP	0.1uF 10% 25V

Ref. No.	Part No.	Description	Remark
C312	1-163-077-00	CERAMIC CHIP	0.1uF 10% 25V
C313	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C314	1-124-589-11	ELECT	47uF 20% 16V
C315	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C316	1-126-301-11	ELECT	1uF 20% 50V
C317	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C318	1-163-101-00	CERAMIC CHIP	22PF 5% 50V
C319	1-163-101-00	CERAMIC CHIP	22PF 5% 50V
C322	1-163-101-00	CERAMIC CHIP	22PF 5% 50V
C323	1-163-101-00	CERAMIC CHIP	22PF 5% 50V
C324	1-163-019-00	CERAMIC CHIP	0.0068uF 10% 50V
C325	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
C326	1-127-530-11	ELECT(SOLID)	22uF 20% 20V
C327	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 90V
C328	1-164-336-11	CERAMIC CHIP	0.33uF 25V
C329	1-127-491-00	ELECT(SOLID)	22uF 20% 10V
C332	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C333	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C334	1-163-019-00	CERAMIC CHIP	0.0068uF 10% 50V
C335	1-124-589-11	ELECT	47uF 20% 16V
C337	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
C338	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C339	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 90V
C340	1-128-163-11	ELECT	4.7uF 20% 50V
C341	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C342	1-164-107-11	CERAMIC CHIP	0.15uF 10% 16V
C343	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C344	1-164-107-11	CERAMIC CHIP	0.15uF 10% 16V
C345	1-164-162-11	CERAMIC CHIP	0.0033uF 10% 50V
C346	1-164-330-21	CERAMIC CHIP	0.22uF 10% 16V
C347	1-164-162-11	CERAMIC CHIP	0.0033uF 10% 50V
C348	1-164-330-21	CERAMIC CHIP	0.22uF 10% 16V
C349	1-164-162-11	CERAMIC CHIP	0.0033uF 10% 50V
C350	1-164-330-21	CERAMIC CHIP	0.22uF 10% 16V
C351	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C352	1-163-809-11	CERAMIC CHIP	0.047uF 10% 25V
C353	1-163-809-11	CERAMIC CHIP	0.047uF 10% 25V
C354	1-124-589-11	ELECT	47uF 20% 16V
C356	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C357	1-124-589-11	ELECT	47uF 20% 16V
C358	1-124-589-11	ELECT	47uF 20% 16V
C362	1-164-222-11	CERAMIC CHIP	0.22uF 25V
C363	1-163-036-00	CERAMIC CHIP	0.068uF 50V
C364	1-163-036-00	CERAMIC CHIP	0.068uF 50V
C365	1-163-036-00	CERAMIC CHIP	0.068uF 50V
C401	1-124-442-60	ELECT	330uF 20% 6.3V
C402	1-124-442-60	ELECT	330uF 20% 6.3V
C403	1-124-635-00	ELECT	220uF 20% 6.3V
C404	1-124-635-00	ELECT	220uF 20% 6.3V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
C405	1-164-005-11	CERAMIC CHIP	0.47uF	25V	C527	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C405	1-164-005-11	CERAMIC CHIP	0.47uF	25V	C528	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C409	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	C530	1-126-163-11	ELECT	4.7uF	20%	50V
C410	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	C531	1-124-477-11	ELECT	47uF	20%	25V
C411	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C532	1-126-163-11	ELECT	4.7uF	20%	50V	
C412	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C533	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C415	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C534	1-126-157-11	ELECT	10uF	20%	16V	
C416	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C535	1-124-257-00	ELECT	2.2uF	20%	50V	
C423	1-126-157-11	ELECT	10uF	20%	16V	C536	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C424	1-126-157-11	ELECT	10uF	20%	16V	C537	1-126-157-11	ELECT	10uF	20%	16V
C425	1-164-005-11	CERAMIC CHIP	0.47uF	25V	C538	1-163-031-11	CERAMIC CHIP	0.01uF	50V		
C426	1-164-005-11	CERAMIC CHIP	0.47uF	25V	C539	1-163-031-11	CERAMIC CHIP	0.01uF	50V		
C427	1-124-477-11	ELECT	47uF	20%	25V	C540	1-126-157-11	ELECT	10uF	20%	16V
C428	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C541	1-126-301-11	ELECT	1uF	20%	50V	
C429	1-124-477-11	ELECT	47uF	20%	25V	C542	1-126-163-11	ELECT	4.7uF	20%	50V
C431	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	C543	1-164-005-11	CERAMIC CHIP	0.47uF	25V	
C432	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	C544	1-164-005-11	CERAMIC CHIP	0.47uF	25V	
C435	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	C545	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C436	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	C546	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C437	1-126-157-11	ELECT	10uF	20%	16V	C547	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C438	1-126-157-11	ELECT	10uF	20%	16V	C548	1-126-301-11	ELECT	1uF	20%	50V
C443	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C549	1-164-232-11	CERAMIC CHIP	0.01uF	50V		
C447	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C551	1-163-031-11	CERAMIC CHIP	0.01uF	50V		
C450	1-126-301-11	ELECT	1uF	20%	50V	C552	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C451	1-126-301-11	ELECT	1uF	20%	50V	C553	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C454	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C554	1-163-031-11	CERAMIC CHIP	0.01uF	50V		
C455	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C555	1-163-031-11	CERAMIC CHIP	0.01uF	50V		
C501	1-126-157-11	ELECT	10uF	20%	16V	C556	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C502	1-163-031-11	CERAMIC CHIP	0.01uF	50V	C557	1-163-031-11	CERAMIC CHIP	0.01uF	50V		
C503	1-124-257-00	ELECT	2.2uF	20%	50V	C558	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C504	1-126-157-11	ELECT	10uF	20%	16V	C559	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C505	1-126-163-11	ELECT	4.7uF	20%	50V	C560	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C506	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	C561	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C507	1-124-477-11	ELECT	47uF	20%	25V	C562	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C508	1-126-163-11	ELECT	4.7uF	20%	50V	C563	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C509	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	C564	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C510	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	C565	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C511	1-126-163-11	ELECT	4.7uF	20%	50V	C566	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C512	1-126-157-11	ELECT	10uF	20%	16V	C567	1-126-163-11	ELECT	4.7uF	20%	50V
C513	1-124-229-00	ELECT	33uF	20%	10V	C568	1-126-163-11	ELECT	4.7uF	20%	50V
C514	1-126-163-11	ELECT	4.7uF	20%	50V (NP, UB)	C570	1-126-157-11	ELECT	10uF	20%	16V
C515	1-124-477-11	ELECT	47uF	20%	25V	C571	1-124-282-00	ELECT	33uF	20%	5.3V
C516	1-126-163-11	ELECT	4.7uF	20%	50V	C572	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C517	1-124-477-11	ELECT	47uF	20%	25V	C573	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C519	1-163-031-11	CERAMIC CHIP	0.01uF	50V	C575	1-124-282-00	ELECT	33uF	20%	5.3V	
C520	1-126-163-11	ELECT	4.7uF	20%	50V	C576	1-126-157-11	ELECT	10uF	20%	16V
C522	1-163-031-11	CERAMIC CHIP	0.01uF	50V	C582	1-163-031-11	CERAMIC CHIP	0.01uF	50V		
C523	1-126-163-11	ELECT	4.7uF	20%	50V (NP, UB)	C583	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C525	1-126-163-11	ELECT	4.7uF	20%	50V	C584	1-126-157-11	ELECT	10uF	20%	16V

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Ref. No.	Part No.	Description	Remark
C585	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C586	1-126-157-11	ELECT	10uF 20% 16V
C587	1-126-157-11	ELECT	10uF 20% 16V
C590	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C591	1-163-869-11	CERAMIC CHIP	0.047uF 10% 25V
C592	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C593	1-163-809-11	CERAMIC CHIP	0.047uF 10% 25V
C594	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 50V
C651	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C652	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C653	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C654	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C655	1-164-182-11	CERAMIC CHIP	0.0033uF 10% 50V
C656	1-164-182-11	CERAMIC CHIP	0.0033uF 10% 50V
C657	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C658	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C701	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C702	1-124-638-11	ELECT	22uF 20% 10V
C703	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C704	1-124-638-11	ELECT	22uF 20% 10V
C705	1-124-638-11	ELECT	22uF 20% 10V
C706	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C708	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C710	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C711	1-124-638-11	ELECT	22uF 20% 10V
C713	1-124-638-11	ELECT	22uF 20% 10V
C724	1-164-181-11	CERAMIC CHIP	0.0022uF 10% 100V
C725	1-164-182-11	CERAMIC CHIP	0.0033uF 10% 50V
C726	1-163-011-11	CERAMIC CHIP	0.0015uF 10% 50V
C727	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C728	1-126-157-11	ELECT	10uF 20% 16V
C729	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C730	1-124-443-00	ELECT	100uF 20% 10V
C741	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C742	1-126-154-11	ELECT	47uF 20% 6.3V
C746	1-124-257-00	ELECT	2.2uF 20% 50V
C748	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C749	1-124-477-11	ELECT	47uF 20% 25V
C750	1-126-177-11	ELECT	100uF 20% 10V
C751	1-124-638-11	ELECT	22uF 20% 10V
C752	1-163-237-11	CERAMIC CHIP	27PF 5% 50V
C753	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C755	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C756	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C757	1-126-154-11	ELECT	47uF 20% 6.3V
C760	1-164-005-11	CERAMIC CHIP	0.47uF 25V
C762	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C763	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C764	1-163-031-11	CERAMIC CHIP	0.01uF 50V

Ref. No.	Part No.	Description	Remark
C766	1-124-638-11	ELECT	22uF 20% 10V
C768	1-124-638-11	ELECT	22uF 20% 10V
C769	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C770	1-126-154-11	ELECT	47uF 20% 6.3V
C771	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C772	1-126-154-11	ELECT	47uF 20% 6.3V
C773	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C774	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V
C775	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C776	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C777	1-163-239-11	CERAMIC CHIP	33PF 5% 50V
C778	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C780	1-124-257-00	ELECT	2.2uF 20% 50V
C781	1-164-343-11	CERAMIC CHIP	0.056uF 10% 25V
C782	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
C783	1-163-139-00	CERAMIC CHIP	820PF 5% 50V
C784	1-126-301-11	ELECT	1uF 20% 30V
C785	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C786	1-124-477-11	ELECT	47uF 20% 25V
C790	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C791	1-163-129-00	CERAMIC CHIP	330PF 5% 50V
C792	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 50V
C793	1-163-003-11	CERAMIC CHIP	330PF 10% 50V
C794	1-163-003-11	CERAMIC CHIP	330PF 10% 50V
C801	1-124-638-11	ELECT	22uF 20% 10V
C802	1-124-638-11	ELECT	22uF 20% 10V
C803	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C805	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C806	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C807	1-124-443-00	ELECT	100uF 20% 10V
C808	1-124-477-11	ELECT	47uF 20% 25V
C809	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C810	1-126-157-11	ELECT	10uF 20% 16V
C811	1-124-638-11	ELECT	22uF 20% 10V
C812	1-124-443-00	ELECT	100uF 20% 10V
C813	1-126-157-11	ELECT	10uF 20% 16V
C814	1-124-638-11	ELECT	22uF 20% 10V
C815	1-124-443-00	ELECT	100uF 20% 10V
C816	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C817	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C824	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C830	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C831	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C832	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C833	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C835	1-163-129-00	CERAMIC CHIP	330PF 5% 50V
C836	1-163-129-00	CERAMIC CHIP	330PF 5% 50V
C837	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C838	1-163-129-00	CERAMIC CHIP	330PF 5% 50V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C850	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	D006	8-719-210-39	DIODE	EC10Q5-04
C851	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	D007	8-719-801-78	DIODE	1SS184
C852	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	D008	8-719-801-78	DIODE	1SS184
C853	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	D010	8-719-801-78	DIODE	1SS184
C854	1-126-157-11	ELECT	10uF 20% 16V	D011	8-719-106-08	DIODE	RD6. 1M-B2
C856	1-126-154-11	ELECT	47uF 20% 6.3V	D012	8-719-801-78	DIODE	1SS184
C857	1-163-031-11	CERAMIC CHIP	0.01uF 50V	D016	8-719-210-39	DIODE	EC10Q5-04
C859	1-163-031-11	CERAMIC CHIP	0.01uF 50V	D021	8-719-017-58	DIODE	M68068
C869	1-127-558-11	ELECT(SOLID)	10uF 20% 10V	D361	8-719-104-34	DIODE	1S2836
C970	1-124-589-11	ELECT	47uF 20% 15V	D302	8-719-106-44	DIODE	RD6. 1M-B2
C972	1-124-589-11	ELECT	47uF 20% 16V	D303	8-719-938-78	DIODE	SB10-05PCP
C973	1-163-031-11	CERAMIC CHIP	0.01uF 50V	D304	8-719-938-78	DIODE	SB05-05CP
C974	1-124-477-11	ELECT	47uF 20% 25V	D653	8-719-421-59	DIODE	MA3130WA-TX
C975	1-163-031-11	CERAMIC CHIP	0.01uF 50V	D654	8-719-421-59	DIODE	MA3130WA-TX
C976	1-124-477-11	ELECT	47uF 20% 25V	D655	8-719-421-59	DIODE	MA3130WA-TX
C977	1-163-031-11	CERAMIC CHIP	0.01uF 50V	D656	8-719-421-59	DIODE	MA3130WA-TX
C978	1-163-031-11	CERAMIC CHIP	0.01uF 50V	D657	8-719-106-43	DIODE	RD6. 1M-B1
< CONNECTOR >				D658	8-719-106-43	DIODE	RD6. 1M-B1
* CN001	1-691-059-21	HOUSING, CONNECTOR 27P		D701	8-719-801-78	DIODE	1SS184
* CN002	1-691-059-21	HOUSING, CONNECTOR 27P		D702	8-719-801-78	DIODE	1SS184
CN004	1-691-053-21	HOUSING, CONNECTOR 21P		D719	8-719-421-59	DIODE	MA3130WA-TX
CN005	1-569-341-11	CONNECTOR, BOARD TO BOARD 19P		D720	8-719-421-59	DIODE	MA3130WA-TX
CN006	1-573-842-11	CONNECTOR, BOARD TO BOARD 10P (VC)		D721	8-719-421-59	DIODE	MA3130WA-TX
CN008	1-691-057-21	HOUSING, CONNECTOR 25P		D722	8-719-421-59	DIODE	MA3130WA-TX
CN009	1-764-055-11	CONNECTOR, BOARD TO BOARD 40P		D723	8-719-421-59	DIODE	MA3130WA-TX
CN010	1-569-341-11	CONNECTOR, BOARD TO BOARD 19P		D724	8-719-421-59	DIODE	MA3130WA-TX
CN011	1-750-554-11	CONNECTOR, BOARD TO BOARD 19P		D730	8-719-106-43	DIODE	RD6. 1M-B1
* CN101	1-560-900-00	PK, CONNECTOR 12P		D731	8-719-106-43	DIODE	RD6. 1M-B1
* CN102	1-580-897-00	PK, CONNECTOR 9P		D732	8-719-106-43	DIODE	RD6. 1M-B1
CN103	1-691-057-21	HOUSING, CONNECTOR 25P		D734	8-719-106-43	DIODE	RD6. 1M-B1
CN104	1-569-340-11	CONNECTOR, BOARD TO BOARD 11P		D950	8-719-210-33	DIODE	EC10Q52
CN105	1-569-341-11	CONNECTOR, BOARD TO BOARD 19P		D951	8-719-801-78	DIODE	1SS184 (VC, NP, AE, UB)
CN106	1-569-341-11	CONNECTOR, BOARD TO BOARD 19P		D952	8-719-104-34	DIODE	1S2836 (VC, NP, AE, UB)
CN107	1-569-930-11	HOUSING, CONNECTOR 13P		< FERRITE BEAD >			
* CN301	1-564-001-11	PK, CONNECTOR 2P		F8001	1-543-256-11	BEAD, FERRITE	
* CN302	1-563-373-11	SOCKET, CONNECTOR 25P		F8002	1-543-256-11	BEAD, FERRITE	
* CN303	1-564-004-11	PK, CONNECTOR 5P		F8003	1-543-256-11	BEAD, FERRITE	
CN501	1-573-842-11	CONNECTOR, BOARD TO BOARD 10P		F8004	1-543-256-11	BEAD, FERRITE	
* CN502	1-691-072-11	HOUSING, CONNECTOR 13P		F8005	1-543-256-11	BEAD, FERRITE	
* CN501	1-691-059-21	HOUSING, CONNECTOR 27P		F8006	1-543-256-11	BEAD, FERRITE	
< DIODE >				F8008	1-414-234-11	INDUCTOR, FERRITE BEAD	
D001	8-719-801-78	DIODE	1SS184	F8009	1-216-295-00	METAL CHIP	0 5% 1/10W
D002	8-719-801-78	DIODE	1SS184	F8051	1-216-295-00	METAL CHIP	0 5% 1/10W
D003	8-719-210-39	DIODE	EC10Q5-04	F8052	1-216-295-00	METAL CHIP	0 5% 1/10W
D004	8-719-210-39	DIODE	EC10Q5-04	F8650	1-216-295-00	METAL CHIP	0 5% 1/10W
D005	8-719-801-78	DIODE	1SS184	F8655	1-414-235-11	INDUCTOR, FERRITE BEAD	
				F8801	1-216-295-00	METAL CHIP	0 5% 1/10W
				F8802	1-216-295-00	METAL CHIP	0 5% 1/10W

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Ref. No.	Part No.	Description	Remark
FB803	1-216-295-00	METAL CHIP	0 5% 1/10W
FB804	1-216-295-00	METAL CHIP	0 5% 1/10W
FB805	1-216-295-00	METAL CHIP	0 5% 1/10W
FB806	1-216-295-00	METAL CHIP	0 5% 1/10W
FB807	1-216-295-00	METAL CHIP	0 5% 1/10W
FB809	1-216-295-00	METAL CHIP	0 5% 1/10W
FB810	1-216-295-00	METAL CHIP	0 5% 1/10W
FB811	1-216-295-00	METAL CHIP	0 5% 1/10W
FB812	1-216-295-00	METAL CHIP	0 5% 1/10W
FB813	1-216-295-00	METAL CHIP	0 5% 1/10W
FB901	1-216-295-00	METAL CHIP	0 5% 1/10W
FB902	1-216-295-00	METAL CHIP	0 5% 1/10W
FB904	1-216-296-00	METAL CHIP	0 5% 1/2W
FB905	1-216-295-00	METAL CHIP	0 5% 1/10W

< FILTER >

FL501	1-236-837-21	FILTER, BAND PASS
FL502	1-236-838-21	FILTER, BAND PASS

< IC >

IC001	8-752-842-88	IC	CXP2004M
IC002	8-759-252-47	IC	MB880986PF-G
IC003	8-752-847-34	IC	CXP87140-012Q
IC004	8-759-183-18	IC	CA783C56K-LE10
IC005	8-759-998-02	IC	TL1986CD6
IC006	8-759-998-02	IC	LM338D
IC007	8-759-998-08	IC	LM358D
IC009	8-759-070-08	IC	CXA1481AQ
IC010	8-759-635-27	IC	NE2352ZP
IC012	8-759-182-84	IC	PQ055Z5U
IC301	8-759-182-89	IC	BA52198FF-Y
IC302	8-759-945-17	IC	MB3775PF
IC303	8-759-148-05	IC	CXA8010M
IC305	8-759-166-78	IC	CXA8006RM-ELL1000
IC306	8-759-055-62	IC	BA6440-T1
IC307	8-759-172-41	IC	L78M09T-TL
IC401	8-759-924-46	IC	BA4560F
IC402	8-759-300-71	IC	ND140538FP
IC403	8-759-924-46	IC	BA4560F
IC404	8-759-009-06	IC	MC14052BF
IC405	8-759-170-73	IC	TA78L12S
IC406	8-759-069-14	IC	ME1132L
IC407	8-759-009-06	IC	MC14052BF
IC408	8-759-924-46	IC	BA4560F
IC410	8-759-924-46	IC	BA4560F
IC411	8-759-909-71	IC	BA4558F
IC412	8-759-009-06	IC	MC14052BF
IC501	8-759-077-11	IC	CXA1542Q
IC501	8-759-169-76	IC	AK3885FBP-NS

Ref. No.	Part No.	Description	Remark
IC502	8-759-189-19	IC	AN3900N5C-E2
IC504	8-759-909-71	IC	BA4558F
IC701	8-752-052-58	IC	CXA1410M
IC703	8-759-164-18	IC	MM1118XFF
IC704	8-759-164-18	IC	MM1118XFF
IC705	8-759-252-46	IC	MB90085PF
IC706	8-759-164-09	IC	LA7211M
IC707	8-759-182-16	IC	MM1195XFBF
IC850	8-759-182-84	IC	PQ055Z5U
IC851	8-759-182-91	IC	PQ12T25U
IC852	8-759-182-86	IC	PQ05T25U

< JACK >

J801	1-537-821-11	TERMINAL BOARD (LINE IN 3/LINE OUT)
J802	1-507-578-00	JACK (CONTROL S IN)
J803	1-691-258-11	JACK (LANC)

< JUMPER RESISTOR >

JR001	1-414-235-11	INDUCTOR, FERRITE READ			
JR002	1-414-235-11	INDUCTOR, FERRITE READ			
JR003	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR004	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
JR005	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
JR006	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR007	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR008	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR009	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR010	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR011	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR012	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR013	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR014	1-216-295-00	METAL CHIP	0	5%	1/10W
JR015	1-216-295-00	METAL CHIP	0	5%	1/10W
JR016	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR017	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR018	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR019	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR020	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR021	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR022	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR023	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR024	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR025	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR026	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR027	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR028	1-216-295-00	METAL CHIP	0	5%	1/10W
JR029	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR030	1-216-049-00	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
JR031	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR032	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR033	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR034	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR035	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR036	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR037	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR038	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR039	1-216-025-00	METAL CHIP	100	5%	1/10W
JR040	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR041	1-216-073-00	METAL CHIP	10K	5%	1/10W
JR042	1-216-025-00	METAL CHIP	100	5%	1/10W
JR043	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR044	1-216-025-00	METAL CHIP	100	5%	1/10W
JR045	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR046	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR047	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR048	1-216-235-00	METAL CHIP	0	5%	1/10W
JR049	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR050	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR051	1-216-235-00	METAL CHIP	0	5%	1/10W
JR052	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR053	1-216-235-00	METAL CHIP	0	5%	1/10W
JR054	1-410-987-31	INDUCTOR CHIP 2.2UH			
JR055	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR056	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR057	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR058	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR059	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR060	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR061	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR062	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR063	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR064	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR065	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR066	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR067	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR068	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR069	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR070	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR071	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR072	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR073	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR074	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR075	1-216-073-00	METAL CHIP	10K	5%	1/10W
JR076	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR077	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR078	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR079	1-216-048-00	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
JR080	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR083	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR085	1-410-987-31	INDUCTOR CHIP 2.2UH			
JR086	1-216-033-00	METAL CHIP	220	5%	1/10W
JR087	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR088	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR089	1-216-025-00	METAL CHIP	100	5%	1/10W (VC, NP, AE, UB)
JR089	1-216-041-00	METAL CHIP	470	5%	1/10W (B)
JR090	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR091	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR092	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR093	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR094	1-216-073-00	METAL CHIP	10K	5%	1/10W
JR095	1-216-073-00	METAL CHIP	10K	5%	1/10W
JR096	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR097	1-216-073-00	METAL CHIP	10K	5%	1/10W (VC, NP, B)
JR098	1-216-041-00	METAL CHIP	470	5%	1/10W (VC, NP, B)
JR099	1-216-041-00	METAL CHIP	470	5%	1/10W (VC, NP, B)
JR100	1-216-041-00	METAL CHIP	470	5%	1/10W
JR101	1-216-041-00	METAL CHIP	470	5%	1/10W
JR102	1-216-235-00	METAL CHIP	0	5%	1/10W
JR104	1-216-235-00	METAL CHIP	0	5%	1/10W
JR105	1-216-235-00	METAL CHIP	0	5%	1/10W
JR110	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR111	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR112	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR113	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR114	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR115	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR117	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR118	1-216-235-00	METAL CHIP	0	5%	1/10W
JR119	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR120	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR121	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR122	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR123	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR124	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR125	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR127	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR128	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR129	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR130	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR131	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR132	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR133	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR134	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR135	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR136	1-216-048-00	METAL CHIP	1K	5%	1/10W
JR137	1-216-048-00	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
JR138	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR139	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR140	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR141	1-216-097-00	METAL CHIP	100K	5%	1/10W
JR142	1-216-097-00	METAL CHIP	100K	5%	1/10W

JR154	1-216-295-00	METAL CHIP	0	5%	1/10W
JR155	1-216-295-00	METAL CHIP	0	5%	1/10W
JR157	1-216-295-00	METAL CHIP	0	5%	1/10W
JR158	1-216-295-00	METAL CHIP	0	5%	1/10W
JR160	1-216-295-00	METAL CHIP	0	5%	1/10W

JR162	1-216-295-00	METAL CHIP	0	5%	1/10W
JR163	1-216-295-00	METAL CHIP	0	5%	1/10W
JR164	1-216-295-00	METAL CHIP	0	5%	1/10W
JR165	1-216-049-00	METAL CHIP	1K	5%	1/10W
JR166	1-216-295-00	METAL CHIP	0	5%	1/10W

JR167	1-216-295-00	METAL CHIP	0	5%	1/10W
JR168	1-216-295-00	METAL CHIP	0	5%	1/10W
JR169	1-216-295-00	METAL CHIP	0	5%	1/10W
JR171	1-216-295-00	METAL CHIP	0	5%	1/10W
JR172	1-216-295-00	METAL CHIP	0	5%	1/10W

< COIL >

L001	1-408-982-11	INDUCTOR 100uH
L002	1-410-393-11	INDUCTOR CHIP 100uH
L003	1-408-978-21	INDUCTOR 47uH
L004	1-408-987-21	INDUCTOR 330uH
L005	1-408-978-21	INDUCTOR 47uH

L008	1-408-978-21	INDUCTOR 47uH
L301	1-408-978-21	INDUCTOR 47uH
L302	1-424-522-21	COIL, CHOKE 10uH
L304	1-424-524-21	COIL, CHOKE 47uH
L305	1-424-524-21	COIL, CHOKE 47uH

L306	1-408-978-21	INDUCTOR 47uH
L307	1-408-978-21	INDUCTOR 47uH
L503	1-408-982-11	INDUCTOR 100uH
L701	1-408-974-21	INDUCTOR 22uH
L704	1-408-978-21	INDUCTOR 47uH

L706	1-408-974-21	INDUCTOR 22uH
L708	1-408-974-21	INDUCTOR 22uH
L709	1-408-974-21	INDUCTOR 22uH
L710	1-408-974-21	INDUCTOR 22uH
L711	1-408-974-21	INDUCTOR 22uH

L712	1-408-962-21	INDUCTOR 2.2uH
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< IC LINK >

APS001	1-532-805-00	LINK, IC 0.4A (ICP-N10)
APS301	1-532-805-00	LINK, IC 0.4A (ICP-N10)

Ref. No.	Part No.	Description	Remark
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< TRANSISTOR >

Q001	8-729-420-12	TRANSISTOR	XN4213
Q003	8-729-421-19	TRANSISTOR	UN2213
Q004	8-729-424-08	TRANSISTOR	UN2211
Q005	8-729-421-19	TRANSISTOR	UN2213
Q007	8-729-420-12	TRANSISTOR	XN4213

Q008	8-729-807-87	TRANSISTOR	2SB1285-UL6
Q009	8-729-421-19	TRANSISTOR	UN2213
Q010	8-729-421-19	TRANSISTOR	UN2213
Q011	8-729-140-75	TRANSISTOR	2SD999-CLCK
Q012	8-729-140-75	TRANSISTOR	2SD999-CLCK

Q013	8-729-901-06	TRANSISTOR	DTA144EX
Q014	8-729-421-19	TRANSISTOR	UN2213
Q015	8-729-424-08	TRANSISTOR	UN2211
Q016	8-729-402-19	TRANSISTOR	XN6501
Q018	8-729-010-05	TRANSISTOR	MSB709-RT1

Q019	8-729-421-19	TRANSISTOR	UN2213
Q020	8-729-421-19	TRANSISTOR	UN2213
Q021	8-729-010-05	TRANSISTOR	MSB601-RT1
Q023	8-729-010-05	TRANSISTOR	MSB601-RT1
Q024	8-729-424-08	TRANSISTOR	UN2211

Q025	8-729-421-19	TRANSISTOR	UN2213
Q301	8-729-421-19	TRANSISTOR	UN2213
Q303	8-729-402-19	TRANSISTOR	XN6501
Q304	8-729-420-12	TRANSISTOR	XN4213
Q305	8-729-421-19	TRANSISTOR	UN2213

Q307	8-729-010-05	TRANSISTOR	MSB601-RT1
Q308	8-729-010-05	TRANSISTOR	MSB601-RT1
Q309	8-729-805-25	TRANSISTOR	2SB1121-S
Q310	8-729-805-25	TRANSISTOR	2SB1121-S
Q311	8-729-901-06	TRANSISTOR	DTA144EX

Q312	8-729-420-12	TRANSISTOR	XN4213
Q403	8-729-010-05	TRANSISTOR	MSB601-RT1
Q407	8-729-901-06	TRANSISTOR	DTA144EX
Q501	8-729-402-19	TRANSISTOR	XN6501
Q502	8-729-902-89	TRANSISTOR	DTC114TK

Q503	8-729-421-19	TRANSISTOR	UN2213
Q504	8-729-010-05	TRANSISTOR	MSB601-RT1
Q507	8-729-421-19	TRANSISTOR	UN2213
Q508	8-729-402-19	TRANSISTOR	XN6501
Q509	8-729-402-19	TRANSISTOR	XN6501

Q512	8-729-902-99	TRANSISTOR	DTC114TK
Q513	8-729-902-99	TRANSISTOR	DTC114TK
Q514	8-729-421-19	TRANSISTOR	UN2213
Q515	8-729-421-19	TRANSISTOR	UN2213
Q516	8-729-421-19	TRANSISTOR	UN2213

Q701	8-729-421-19	TRANSISTOR	UN2213
Q705	8-729-421-19	TRANSISTOR	UN2213

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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Ref. No.	Part No.	Description	Remark
Q706	8-729-010-05	TRANSISTOR MSB709-RT1	
Q707	8-729-010-25	TRANSISTOR MSB001-RT1	
Q713	8-729-402-81	TRANSISTOR XM4601	
Q715	8-729-402-81	TRANSISTOR XM4601	
Q716	8-729-421-19	TRANSISTOR UN2213	
Q717	8-729-421-19	TRANSISTOR UN2213	
Q719	8-729-010-25	TRANSISTOR MSB001-RT1	
Q720	8-729-402-84	TRANSISTOR XM4601	
Q721	8-729-402-84	TRANSISTOR XM4601	
Q730	8-729-402-84	TRANSISTOR XM4601	
Q732	8-729-402-84	TRANSISTOR XM4601	
Q733	8-729-402-84	TRANSISTOR XM4601	
Q755	8-729-010-05	TRANSISTOR MSB709-RT1	
Q756	8-729-421-19	TRANSISTOR UN2213	

< RESISTOR >

R002	1-216-295-00	METAL CHIP (VC, NP, B)	0	5%	1/10W
R004	1-216-295-00	METAL CHIP (VC, NP, B)	0	5%	1/10W
R006	1-216-295-00	METAL CHIP (VC, NP, B)	0	5%	1/10W
R007	1-216-295-00	METAL CHIP	0	5%	1/10W
R008	1-216-295-00	METAL CHIP	0	5%	1/10W
R009	1-216-295-00	METAL CHIP	0	5%	1/10W
R012	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R013	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R014	1-216-295-00	METAL CHIP	0	5%	1/10W
R016	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R017	1-216-073-00	METAL CHIP	10K	5%	1/10W
R018	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R019	1-216-049-00	METAL CHIP	1K	5%	1/10W
R020	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R021	1-216-049-00	METAL CHIP	1K	5%	1/10W
R022	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R023	1-216-073-00	METAL CHIP	10K	5%	1/10W
R024	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R025	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R026	1-414-235-11	INDUCTOR, FERRITE BEAD			
R027	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R028	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R029	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R030	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R031	1-216-295-00	METAL CHIP	0	5%	1/10W
R032	1-216-295-00	METAL CHIP	0	5%	1/10W
R033	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R034	1-216-295-00	METAL CHIP	0	5%	1/10W (VC)
R034	1-216-033-00	METAL CHIP	220	5%	1/10W (NP)
R034	1-216-040-00	METAL GLAZE	430	5%	1/10W (AE)

R034	1-216-045-00	METAL CHIP	750	5%	1/10W (UB)
R034	1-216-051-00	METAL CHIP	1.2K	5%	1/10W (B)
R035	1-216-049-00	METAL CHIP	1K	5%	1/10W (NP, AE, UB, B)
R036	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R037	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R038	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R040	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R041	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R042	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R043	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R044	1-216-084-00	METAL CHIP	22K	5%	1/10W
R045	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R046	1-247-855-11	CARBON	10K	5%	1/4W
R047	1-216-073-00	METAL CHIP	10K	5%	1/10W
R048	1-216-049-00	METAL CHIP	1K	5%	1/10W
R049	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R050	1-216-049-00	METAL CHIP	1K	5%	1/10W
R051	1-216-049-00	METAL CHIP	1K	5%	1/10W
R052	1-216-049-00	METAL CHIP	1K	5%	1/10W
R053	1-216-049-00	METAL CHIP	1K	5%	1/10W
R054	1-216-049-00	METAL CHIP	1K	5%	1/10W
R055	1-216-049-00	METAL CHIP	1K	5%	1/10W
R056	1-216-049-00	METAL CHIP	1K	5%	1/10W
R057	1-216-049-00	METAL CHIP	1K	5%	1/10W
R058	1-216-049-00	METAL CHIP	1K	5%	1/10W
R059	1-216-049-00	METAL CHIP	1K	5%	1/10W
R060	1-216-049-00	METAL CHIP	1K	5%	1/10W
R061	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R062	1-216-073-00	METAL CHIP	10K	5%	1/10W
R063	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (VC, NP, B)
R064	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (VC, NP, B)
R065	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R067	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R069	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R070	1-216-236-00	METAL CHIP	0	5%	1/8W
R071	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R073	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R074	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R075	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R076	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R077	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R078	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R079	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R080	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R081	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R082	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R083	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R084	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R085	1-216-073-00	METAL CHIP	10K	5%	1/10W

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Ref. No.	Part No.	Description	Remark
R086	1-216-073-00	METAL CHIP	10K 5% 1/10W
R087	1-216-295-00	METAL CHIP	0 5% 1/10W
R088	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R089	1-216-017-00	METAL CHIP	47 5% 1/10W
R090	1-216-113-00	METAL CHIP	470K 5% 1/10W
R092	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R093	1-216-073-00	METAL CHIP	10K 5% 1/10W
R095	1-216-073-00	METAL CHIP	10K 5% 1/10W
R097	1-216-097-00	METAL CHIP	100K 5% 1/10W
R099	1-216-073-00	METAL CHIP	10K 5% 1/10W
R101	1-216-085-00	METAL CHIP	33K 5% 1/10W
R102	1-216-073-00	METAL CHIP	10K 5% 1/10W
R103	1-216-081-00	METAL CHIP	22K 5% 1/10W
R105	1-216-146-00	METAL GLAZE	6.8 5% 1/8W
R107	1-216-121-00	METAL CHIP	1M 5% 1/10W
R109	1-216-045-00	METAL CHIP	1K 5% 1/10W
R110	1-216-098-00	METAL CHIP	120K 5% 1/10W
R111	1-216-073-00	METAL CHIP	10K 5% 1/10W
R112	1-216-121-00	METAL CHIP	1M 5% 1/10W
R113	1-216-129-00	METAL CHIP	2.2M 5% 1/10W
R114	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R115	1-216-105-00	METAL CHIP	220K 5% 1/10W
R116	1-216-088-91	METAL GLAZE	47K 5% 1/10W
R117	1-216-093-00	METAL CHIP	68K 5% 1/10W
R118	1-216-109-00	METAL CHIP	330K 5% 1/10W
R120	1-216-688-11	METAL CHIP	39K 0.5% 1/10W
R121	1-216-079-00	METAL CHIP	18K 5% 1/10W
R122	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R123	1-216-073-00	METAL CHIP	10K 5% 1/10W
R124	1-216-097-00	METAL CHIP	100K 5% 1/10W
R125	1-216-679-11	METAL CHIP	15K 0.5% 1/10W
R126	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R127	1-216-295-00	METAL CHIP	0 5% 1/10W
R128	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R131	1-216-097-00	METAL CHIP	100K 5% 1/10W
R132	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R133	1-216-073-00	METAL CHIP	10K 5% 1/10W
R134	1-216-097-00	METAL CHIP	100K 5% 1/10W
R135	1-216-073-00	METAL CHIP	10K 5% 1/10W
R137	1-216-049-00	METAL CHIP	1K 5% 1/10W
R138	1-216-074-00	METAL CHIP	11K 5% 1/10W
R140	1-216-121-00	METAL CHIP	1M 5% 1/10W
R141	1-216-098-00	METAL CHIP	120K 5% 1/10W
R142	1-216-661-11	METAL CHIP	2.7K 0.5% 1/10W
R143	1-216-049-00	METAL CHIP	1K 5% 1/10W
R144	1-216-073-00	METAL CHIP	10K 5% 1/10W
R145	1-216-113-00	METAL CHIP	470K 5% 1/10W
R146	1-216-097-00	METAL CHIP	100K 5% 1/10W
R147	1-216-099-00	METAL CHIP	120K 5% 1/10W

Ref. No.	Part No.	Description	Remark
R148	1-216-098-00	METAL CHIP	120K 5% 1/10W
R149	1-216-031-00	METAL CHIP	180 5% 1/10W
R150	1-216-059-00	METAL CHIP	6.8K 5% 1/10W
R151	1-216-037-00	METAL CHIP	330 5% 1/10W
R153	1-216-061-00	METAL CHIP	10 5% 1/10W
R155	1-216-073-00	METAL CHIP	10K 5% 1/10W
R157	1-216-089-00	METAL CHIP	6.8K 5% 1/10W
R158	1-216-037-00	METAL CHIP	330 5% 1/10W
R159	1-216-061-00	METAL CHIP	10 5% 1/10W
R161	1-216-081-00	METAL CHIP	22K 5% 1/10W
R162	1-216-085-00	METAL CHIP	33K 5% 1/10W
R163	1-216-295-00	METAL CHIP	0 5% 1/10W
R164	1-216-045-00	METAL CHIP	680 5% 1/10W
R165	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R166	1-216-081-00	METAL CHIP	22K 5% 1/10W
R167	1-216-085-00	METAL CHIP	33K 5% 1/10W
R168	1-216-041-00	METAL CHIP	470 5% 1/10W
R169	1-216-041-00	METAL CHIP	470 5% 1/10W
R170	1-216-172-00	METAL CHIP	82 5% 1/8W
R171	1-414-239-11	INDUCTOR, FERRITE BEAD	
R172	1-216-285-00	METAL CHIP	0 5% 1/10W
R173	1-216-079-00	METAL CHIP	18K 5% 1/10W
R175	1-216-085-00	METAL CHIP	33K 5% 1/10W
R177	1-216-295-00	METAL CHIP	0 5% 1/10W (VC)
R178	1-216-295-00	METAL CHIP	0 5% 1/10W (VC)
R185	1-216-295-00	METAL CHIP	0 5% 1/10W
R190	1-216-295-00	METAL CHIP	0 5% 1/10W
R198	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R199	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R200	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R202	1-216-089-91	METAL GLAZE	47K 5% 1/10W (VC, NP, B)
R204	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R205	1-216-049-00	METAL CHIP	1K 5% 1/10W
R207	1-216-073-00	METAL CHIP	10K 5% 1/10W
R212	1-216-049-00	METAL CHIP	1K 5% 1/10W
R213	1-216-073-00	METAL CHIP	10K 5% 1/10W
R214	1-216-073-00	METAL CHIP	10K 5% 1/10W
R221	1-216-097-00	METAL CHIP	100K 5% 1/10W
R224	1-216-295-00	METAL CHIP	0 5% 1/10W
R234	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R303	1-216-097-00	METAL CHIP	100K 5% 1/10W
R304	1-216-097-00	METAL CHIP	100K 5% 1/10W
R306	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R308	1-216-097-00	METAL CHIP	100K 5% 1/10W
R309	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R312	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R314	1-216-121-00	METAL CHIP	1M 5% 1/10W
R317	1-216-055-00	METAL CHIP	1.8K 5% 1/10W
R318	1-216-055-00	METAL CHIP	1.8K 5% 1/10W

Ref. No.	Part No.	Description	Remark		
R319	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R320	1-216-013-00	METAL CHIP	33	5%	1/10W
R321	1-216-013-00	METAL CHIP	33	5%	1/10W
R322	1-216-013-00	METAL CHIP	33	5%	1/10W
R323	1-216-013-00	METAL CHIP	33	5%	1/10W
R324	1-216-033-00	METAL CHIP	220	5%	1/10W
R325	1-216-121-00	METAL CHIP	1M	5%	1/10W
R326	1-216-079-00	METAL CHIP	18K	5%	1/10W
R327	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R328	1-216-079-00	METAL CHIP	18K	5%	1/10W
R329	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R330	1-216-073-00	METAL CHIP	10K	5%	1/10W
R331	1-216-045-00	METAL CHIP	680	5%	1/10W
R332	1-216-045-00	METAL CHIP	680	5%	1/10W
R333	1-216-073-00	METAL CHIP	10K	5%	1/10W
R334	1-216-073-00	METAL CHIP	10K	5%	1/10W
R337	1-216-046-00	METAL CHIP	910	5%	1/10W
R338	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R339	1-216-055-00	METAL CHIP	1.6K	5%	1/10W
R340	1-216-077-00	METAL CHIP	15K	5%	1/10W
R343	1-216-073-00	METAL CHIP	10K	5%	1/10W
R345	1-216-073-00	METAL CHIP	10K	5%	1/10W
R347	1-216-093-00	METAL CHIP	68K	5%	1/10W
R348	1-216-097-00	METAL CHIP	100K	5%	1/10W
R349	1-216-754-11	METAL CHIP	120K	0.50%	1/10W
R350	1-216-045-00	METAL CHIP	4.7K	5%	1/10W
R352	1-216-093-00	METAL CHIP	68K	5%	1/10W
R354	1-216-073-00	METAL CHIP	10K	5%	1/10W
R356	1-216-676-11	METAL CHIP	15K	0.5%	1/10W
R357	1-216-093-00	METAL CHIP	68K	5%	1/10W
R359	1-216-051-00	METAL CHIP	3.3K	5%	1/10W
R361	1-216-085-00	METAL CHIP	33K	5%	1/10W
R363	1-216-107-91	METAL GLAZE	1.5	5%	1/8W
R364	1-216-107-91	METAL GLAZE	1.5	5%	1/8W
R366	1-216-037-00	METAL CHIP	330	5%	1/10W
R367	1-216-107-91	METAL GLAZE	1.5	5%	1/8W
R371	1-216-083-00	METAL CHIP	27K	5%	1/10W
R372	1-216-591-11	METAL CHIP	47K	0.5%	1/10W
R373	1-216-683-11	METAL CHIP	22K	0.5%	1/10W
R374	1-216-083-00	METAL CHIP	27K	5%	1/10W
R375	1-216-680-11	METAL CHIP	16K	0.5%	1/10W
R377	1-217-571-11	METAL CHIP	1	5%	1/10W
R378	1-216-583-11	METAL CHIP	22K	0.5%	1/10W
R379	1-217-571-11	METAL CHIP	1	5%	1/10W
R380	1-217-571-11	METAL CHIP	1	5%	1/10W
R381	1-216-083-00	METAL CHIP	27K	5%	1/10W
R382	1-217-671-11	METAL CHIP	1	5%	1/10W
R385	1-216-033-00	METAL CHIP	220	5%	1/10W
R386	1-216-033-00	METAL CHIP	220	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R387	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R389	1-216-295-00	METAL CHIP	0	5%	1/10W
R391	1-216-295-00	METAL CHIP	0	5%	1/10W
R393	1-216-075-00	METAL CHIP	12K	5%	1/10W
R394	1-216-073-00	METAL CHIP	10K	5%	1/10W
R395	1-216-037-00	METAL CHIP	330	5%	1/10W
R396	1-216-295-00	METAL CHIP	0	5%	1/10W
R401	1-216-760-11	METAL GLAZE	220K	2%	1/10W
R402	1-216-760-11	METAL GLAZE	220K	2%	1/10W
R403	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R404	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R405	1-216-760-11	METAL GLAZE	220K	2%	1/10W
R406	1-216-760-11	METAL GLAZE	220K	2%	1/10W
R407	1-216-760-11	METAL GLAZE	220K	2%	1/10W
R408	1-216-760-11	METAL GLAZE	220K	2%	1/10W
R409	1-216-295-00	METAL CHIP	0	5%	1/10W
R413	1-216-591-11	METAL CHIP	47K	0.5%	1/10W
R414	1-216-591-11	METAL CHIP	47K	0.5%	1/10W
R415	1-216-683-11	METAL CHIP	22K	0.5%	1/10W
R416	1-216-683-11	METAL CHIP	22K	0.5%	1/10W
R417	1-216-683-11	METAL CHIP	22K	0.5%	1/10W
R418	1-216-683-11	METAL CHIP	22K	0.5%	1/10W
R419	1-216-681-11	METAL CHIP	47K	0.5%	1/10W
R420	1-216-681-11	METAL CHIP	47K	0.5%	1/10W
R421	1-216-295-00	METAL CHIP	0	5%	1/10W
R422	1-216-295-00	METAL CHIP	0	5%	1/10W
R425	1-216-097-00	METAL CHIP	100K	5%	1/10W
R426	1-216-097-00	METAL CHIP	100K	5%	1/10W
R429	1-216-295-00	METAL CHIP	0	5%	1/10W
R430	1-216-295-00	METAL CHIP	0	5%	1/10W
R437	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R438	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R439	1-216-073-00	METAL CHIP	10K	5%	1/10W
R440	1-216-073-00	METAL CHIP	10K	5%	1/10W
R441	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R442	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R443	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R444	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R445	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R446	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R447	1-216-627-11	METAL CHIP	100	0.5%	1/10W
R448	1-216-627-11	METAL CHIP	100	0.5%	1/10W
R449	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R450	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R451	1-216-295-00	METAL CHIP	0	5%	1/10W
R452	1-216-295-00	METAL CHIP	0	5%	1/10W
R458	1-216-583-11	METAL CHIP	22K	0.5%	1/10W
R460	1-216-583-11	METAL CHIP	22K	0.5%	1/10W
R463	1-216-627-11	METAL CHIP	100	0.5%	1/10W

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Ref. No.	Part No.	Description	Remark
R464	1-216-627-11	METAL CHIP	100 0.5% 1/10W
R465	1-216-677-00	METAL CHIP	15K 5% 1/10W
R466	1-216-677-00	METAL CHIP	15K 5% 1/10W
R468	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R469	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R470	1-216-097-00	METAL CHIP	100K 5% 1/10W
R471	1-216-097-00	METAL CHIP	100K 5% 1/10W
R472	1-216-583-11	METAL CHIP	22K 0.5% 1/10W
R473	1-216-583-11	METAL CHIP	22K 0.5% 1/10W
R474	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
R475	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
R478	1-216-583-11	METAL CHIP	22K 0.5% 1/10W
R479	1-216-583-11	METAL CHIP	22K 0.5% 1/10W
R483	1-216-295-00	METAL CHIP	0 5% 1/10W
R484	1-216-295-00	METAL CHIP	0 5% 1/10W
R485	1-216-627-11	METAL CHIP	100 0.5% 1/10W
R486	1-216-627-11	METAL CHIP	100 0.5% 1/10W
R495	1-216-295-00	METAL CHIP	0 5% 1/10W
R501	1-216-073-00	METAL CHIP	10K 5% 1/10W
R502	1-216-073-00	METAL CHIP	10K 5% 1/10W
R503	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R504	1-216-295-00	METAL CHIP	0 5% 1/10W (VC, AE, B)
R505	1-216-295-00	METAL CHIP	0 5% 1/10W (NP, UB)
R506	1-216-083-00	METAL CHIP	27K 5% 1/10W
R507	1-216-073-00	METAL CHIP	10K 5% 1/10W
R508	1-216-121-00	METAL CHIP	1M 5% 1/10W
R509	1-216-075-00	METAL CHIP	12K 5% 1/10W
R510	1-216-085-00	METAL CHIP	33K 5% 1/10W (NP, UB)
R511	1-216-073-00	METAL CHIP	18K 5% 1/10W (NP, UB)
R512	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R513	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R515	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R516	1-216-295-00	METAL CHIP	0 5% 1/10W
R518	1-216-083-00	METAL CHIP	27K 5% 1/10W
R519	1-216-073-00	METAL CHIP	10K 5% 1/10W
R521	1-216-295-00	METAL CHIP	0 5% 1/10W
R524	1-216-295-00	METAL CHIP	0 5% 1/10W
R526	1-216-059-00	METAL CHIP	2.7K 5% 1/10W
R527	1-216-105-00	METAL CHIP	220K 5% 1/10W
R528	1-216-073-00	METAL CHIP	10K 5% 1/10W
R529	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R530	1-216-073-00	METAL CHIP	10K 5% 1/10W
R531	1-216-295-00	METAL CHIP	0 5% 1/10W
R532	1-216-077-00	METAL CHIP	15K 5% 1/10W
R533	1-216-089-91	METAL GLAZE	5.6K 5% 1/10W
R534	1-216-295-00	METAL CHIP	0 5% 1/10W
R536	1-216-073-00	METAL CHIP	10K 5% 1/10W
R537	1-216-085-00	METAL CHIP	33K 5% 1/10W
R538	1-216-295-00	METAL CHIP	0 5% 1/10W

Ref. No.	Part No.	Description	Remark
R540	1-216-077-00	METAL CHIP	15K 5% 1/10W
R541	1-216-071-00	METAL CHIP	8.2K 5% 1/10W
R542	1-216-073-00	METAL CHIP	10K 5% 1/10W
R543	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R544	1-216-059-00	METAL CHIP	2.7K 5% 1/10W
R545	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R546	1-216-081-00	METAL CHIP	22K 5% 1/10W
R547	1-216-079-00	METAL CHIP	18K 5% 1/10W
R548	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R549	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
R550	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R551	1-216-073-00	METAL CHIP	10K 5% 1/10W
R552	1-216-073-00	METAL CHIP	10K 5% 1/10W
R553	1-216-041-00	METAL CHIP	470 5% 1/10W
R554	1-216-049-00	METAL CHIP	1K 5% 1/10W
R555	1-216-049-00	METAL CHIP	1K 5% 1/10W
R556	1-216-049-00	METAL CHIP	1K 5% 1/10W
R557	1-216-049-00	METAL CHIP	1K 5% 1/10W
R558	1-216-083-00	METAL CHIP	27K 5% 1/10W
R559	1-216-083-00	METAL CHIP	27K 5% 1/10W
R560	1-216-073-00	METAL CHIP	10K 5% 1/10W
R561	1-216-073-00	METAL CHIP	10K 5% 1/10W
R562	1-216-064-00	METAL CHIP	4.3K 5% 1/10W
R563	1-216-064-00	METAL CHIP	4.3K 5% 1/10W
R564	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R565	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R566	1-216-049-00	METAL CHIP	1K 5% 1/10W
R567	1-216-049-00	METAL CHIP	1K 5% 1/10W
R569	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R570	1-216-073-00	METAL CHIP	10K 5% 1/10W
R571	1-216-073-00	METAL CHIP	10K 5% 1/10W
R572	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R573	1-216-057-00	METAL CHIP	5.6K 5% 1/10W
R574	1-216-073-00	METAL CHIP	10K 5% 1/10W
R575	1-216-073-00	METAL CHIP	10K 5% 1/10W
R583	1-216-295-00	METAL CHIP	0 5% 1/10W
R586	1-216-295-00	METAL CHIP	0 5% 1/10W
R587	1-216-049-00	METAL CHIP	1K 5% 1/10W
R588	1-216-077-00	METAL CHIP	15K 5% 1/10W
R589	1-216-077-00	METAL CHIP	15K 5% 1/10W
R590	1-216-069-00	METAL CHIP	5.6K 5% 1/10W
R591	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R592	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R593	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R594	1-216-113-00	METAL CHIP	470K 5% 1/10W
R595	1-216-113-00	METAL CHIP	470K 5% 1/10W
R596	1-216-077-00	METAL CHIP	15K 5% 1/10W
R597	1-216-073-00	METAL CHIP	10K 5% 1/10W
R598	1-216-073-00	METAL CHIP	10K 5% 1/10W

Ref. No.	Part No.	Description	Remark
R651	1-216-037-00	METAL CHIP	330 5% 1/10W
R652	1-216-037-00	METAL CHIP	330 5% 1/10W
R654	1-216-037-00	METAL CHIP	330 5% 1/10W
R655	1-216-037-00	METAL CHIP	330 5% 1/10W
R656	1-216-235-00	METAL CHIP	0 5% 1/10W
R659	1-216-235-00	METAL CHIP	0 5% 1/10W
R661	1-216-049-00	METAL CHIP	1K 5% 1/10W
R662	1-216-635-11	METAL CHIP	220 0.5% 1/10W
R663	1-216-049-00	METAL CHIP	1K 5% 1/10W
R664	1-216-635-11	METAL CHIP	220 0.5% 1/10W
R703	1-216-295-00	METAL CHIP	0 5% 1/10W
R704	1-216-073-00	METAL CHIP	10K 5% 1/10W
R705	1-216-295-00	METAL CHIP	0 5% 1/10W
R706	1-216-295-00	METAL CHIP	0 5% 1/10W
R710	1-216-041-00	METAL CHIP	470 5% 1/10W
R712	1-216-043-00	METAL CHIP	560 5% 1/10W
R722	1-216-295-00	METAL CHIP	0 5% 1/10W
R725	1-216-041-00	METAL CHIP	470 5% 1/10W
R726	1-216-121-00	METAL CHIP	1M 5% 1/10W
R727	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R728	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R729	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R730	1-216-295-00	METAL CHIP	0 5% 1/10W
R732	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R739	1-216-067-00	METAL CHIP	2.2K 5% 1/10W
R740	1-216-041-00	METAL CHIP	470 5% 1/10W
R741	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R748	1-216-105-00	METAL CHIP	220K 5% 1/10W
R750	1-216-105-00	METAL CHIP	220K 5% 1/10W
R751	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R752	1-216-043-00	METAL CHIP	590 5% 1/10W
R753	1-216-637-11	METAL CHIP	270 0.5% 1/10W
R754	1-216-640-11	METAL CHIP	350 0.5% 1/10W
R755	1-216-017-00	METAL CHIP	47 5% 1/10W
R756	1-216-045-00	METAL CHIP	680 5% 1/10W
R757	1-216-055-00	METAL CHIP	1.8K 5% 1/10W
R758	1-216-647-11	METAL CHIP	680 0.5% 1/10W
R759	1-216-295-00	METAL CHIP	0 5% 1/10W
R760	1-216-049-00	METAL CHIP	1K 5% 1/10W
R764	1-216-049-00	METAL CHIP	1K 5% 1/10W
R765	1-216-085-00	METAL CHIP	33K 5% 1/10W
R766	1-216-075-00	METAL CHIP	12K 5% 1/10W
R767	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R768	1-216-085-00	METAL CHIP	33K 5% 1/10W
R769	1-216-073-00	METAL CHIP	10K 5% 1/10W
R771	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R772	1-216-085-00	METAL CHIP	33K 5% 1/10W
R773	1-216-073-00	METAL CHIP	10K 5% 1/10W
R775	1-216-097-00	METAL CHIP	100K 5% 1/10W

Ref. No.	Part No.	Description	Remark
R776	1-216-295-00	METAL CHIP	0 5% 1/10W
R777	1-216-091-00	METAL CHIP	56K 5% 1/10W
R778	1-216-091-00	METAL CHIP	56K 5% 1/10W
R779	1-216-265-00	METAL CHIP	0 5% 1/10W
R780	1-216-285-00	METAL CHIP	0 5% 1/10W
R781	1-216-295-00	METAL CHIP	0 5% 1/10W
R782	1-216-295-00	METAL CHIP	0 5% 1/10W
R783	1-216-295-00	METAL CHIP	0 5% 1/10W
R784	1-216-295-00	METAL CHIP	0 5% 1/10W
R785	1-216-101-00	METAL CHIP	150K 5% 1/10W
R786	1-216-043-00	METAL CHIP	560 5% 1/10W
R787	1-216-063-00	METAL CHIP	3.9K 5% 1/10W
R788	1-216-049-00	METAL CHIP	1K 5% 1/10W
R789	1-216-295-00	METAL CHIP	0 5% 1/10W
R790	1-216-295-00	METAL CHIP	0 5% 1/10W
R791	1-216-295-00	METAL CHIP	0 5% 1/10W
R792	1-216-295-00	METAL CHIP	0 5% 1/10W
R794	1-216-081-00	METAL CHIP	22K 5% 1/10W
R795	1-216-295-00	METAL CHIP	0 5% 1/10W
R796	1-216-041-00	METAL CHIP	470 5% 1/10W
R797	1-216-295-00	METAL CHIP	0 5% 1/10W
R800	1-216-295-00	METAL CHIP	0 5% 1/10W
R801	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R802	1-216-049-00	METAL CHIP	1K 5% 1/10W
R803	1-216-050-00	METAL GLAZE	1.1K 5% 1/10W
R804	1-216-295-00	METAL CHIP	0 5% 1/10W
R805	1-216-295-00	METAL CHIP	0 5% 1/10W
R807	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R808	1-216-001-00	METAL CHIP	10 5% 1/10W
R811	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R812	1-216-049-00	METAL CHIP	1K 5% 1/10W
R813	1-216-049-00	METAL CHIP	1K 5% 1/10W
R814	1-216-295-00	METAL CHIP	0 5% 1/10W
R816	1-216-295-00	METAL CHIP	0 5% 1/10W
R817	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R818	1-216-001-00	METAL CHIP	10 5% 1/10W
R821	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R822	1-216-049-00	METAL CHIP	1K 5% 1/10W
R823	1-216-049-00	METAL CHIP	1K 5% 1/10W
R824	1-216-295-00	METAL CHIP	0 5% 1/10W
R826	1-216-295-00	METAL CHIP	0 5% 1/10W
R827	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R828	1-216-001-00	METAL CHIP	10 5% 1/10W
R832	1-216-073-00	METAL CHIP	10K 5% 1/10W
R833	1-216-041-00	METAL CHIP	470 5% 1/10W
R835	1-216-073-00	METAL CHIP	10K 5% 1/10W
R841	1-216-013-00	METAL CHIP	33 5% 1/10W
R842	1-216-013-00	METAL CHIP	33 5% 1/10W
R843	1-216-013-00	METAL CHIP	33 5% 1/10W

Ref. No.	Part No.	Description	Remark
R844	1-216-295-00	METAL CHIP	0 5% 1/10W
R847	1-216-015-00	METAL CHIP	39 5% 1/10W
R848	1-216-295-00	METAL CHIP	0 5% 1/10W
R851	1-216-015-00	METAL CHIP	39 5% 1/10W
R853	1-216-295-00	METAL CHIP	0 5% 1/10W
R854	1-216-015-00	METAL CHIP	39 5% 1/10W
R855	1-216-295-00	METAL CHIP	0 5% 1/10W
R856	1-216-295-00	METAL CHIP	0 5% 1/10W
R857	1-216-295-00	METAL CHIP	0 5% 1/10W
R858	1-216-015-00	METAL CHIP	39 5% 1/10W
R859	1-216-015-00	METAL CHIP	39 5% 1/10W
R860	1-216-015-00	METAL CHIP	39 5% 1/10W
R862	1-216-015-00	METAL CHIP	39 5% 1/10W
R863	1-216-015-00	METAL CHIP	39 5% 1/10W
R864	1-216-015-00	METAL CHIP	39 5% 1/10W
R880	1-216-295-00	METAL CHIP	0 5% 1/10W
R884	1-216-049-00	METAL CHIP	1K 5% 1/10W
R885	1-216-049-00	METAL CHIP	1K 5% 1/10W
R886	1-216-295-00	METAL CHIP	0 5% 1/10W
R890	1-216-295-00	METAL CHIP	0 5% 1/10W
R891	1-216-295-00	METAL CHIP	0 5% 1/10W
R898	1-216-073-00	METAL CHIP	10K 5% 1/10W (B)
R899	1-216-105-00	METAL CHIP	220K 5% 1/10W
R959	1-216-073-00	METAL CHIP	10K 5% 1/10W
R960	1-216-295-00	METAL CHIP	0 5% 1/10W
R961	1-216-295-00	METAL CHIP	0 5% 1/10W
R962	1-216-295-00	METAL CHIP	0 5% 1/10W (VC, NP, UB, B)
R963	1-216-295-00	METAL CHIP	0 5% 1/10W (VC, NP, UB, B)
R964	1-216-295-00	METAL CHIP	0 5% 1/10W (VC, NP, UB, B)
R966	1-216-295-00	METAL CHIP	0 5% 1/10W
R967	1-216-295-00	METAL CHIP	0 5% 1/10W
R968	1-216-295-00	METAL CHIP	0 5% 1/10W
R969	1-216-295-00	METAL CHIP	0 5% 1/10W (VC)
R970	1-216-295-00	METAL CHIP	0 5% 1/10W
R971	1-216-295-00	METAL CHIP	0 5% 1/10W
R972	1-216-295-00	METAL CHIP	0 5% 1/10W
R973	1-216-295-00	METAL CHIP	0 5% 1/10W
R975	1-216-698-00	METAL CHIP	6.8K 5% 1/10W (VC, NP, UB, AE)
R986	1-216-295-00	METAL CHIP	9 5% 1/10W (VC, NP, UB, B)
R989	1-216-295-00	METAL CHIP	0 5% 1/10W
R990	1-216-295-00	METAL CHIP	0 5% 1/10W
R991	1-216-295-00	METAL CHIP	0 5% 1/10W
R992	1-216-295-00	METAL CHIP	0 5% 1/10W
R993	1-216-295-00	METAL CHIP	0 5% 1/10W
R994	1-216-295-00	METAL CHIP	0 5% 1/10W
R995	1-216-295-00	METAL CHIP	0 5% 1/10W
R998	1-216-295-00	METAL CHIP	0 5% 1/10W
R999	1-216-295-00	METAL CHIP	0 5% 1/10W

Ref. No.	Part No.	Description	Remark
< MODULATOR >			
ΔRFU001	1-468-328-11	MODULATOR, RF (RFU-2017) (VC, NP, AE)	
ΔRFU001	1-468-328-51	MODULATOR, RF (RFU-2041) (B)	
ΔRFU001	1-468-347-11	MODULATOR, RF (RFU-2024) (UB)	
< VARIABLE RESISTOR >			
RV301	1-238-855-11	RES, ADJ, CERMET 4.7K	
RV501	1-238-857-11	RES, ADJ, CERMET 22K	
RV502	1-238-857-11	RES, ADJ, CERMET 22K	
< THERMISTOR >			
TH001	1-806-280-60	THERMISTOR S-K	
< VIBRATOR >			
X001	1-579-368-31	VIBRATOR, CRYSTAL (11.75MHz)	
X002	1-577-115-21	OSCILLATOR, CRYSTAL (16MHz)	
X003	1-579-125-11	VIBRATOR, CERAMIC (12MHz)	
X004	1-567-008-31	VIBRATOR, CRYSTAL (32KHz)	
X701	1-577-288-11	VIBRATOR, CRYSTAL (17.7MHz)	
X702	1-577-165-11	VIBRATOR, CERAMIC (500kHz)	

* 1-848-300-11 MD-59 BOARD, COMPLETE			

(Ref. No 4, 000 series)			
1-750-620-11 CONNECTOR (QMS MD)			
3-953-985-01 HOLDER, ST SENSOR			
3-954-638-01 HOLDER (S), PUSH SWITCH			
3-954-639-01 HOLDER (7), PUSH SWITCH			
3-958-218-01 SHEET, INSULATING			
< CONNECTOR >			
CN001	1-569-341-11	CONNECTOR, BOARD TO BOARD 19P	
< DIODE >			
D001	8-719-988-42	DIODE GL453S	
D002	8-719-106-79	DIODE RD7.5M-B1	
D003	8-719-106-23	DIODE RD7.5M-B2	
D004	8-719-106-23	DIODE RD7.5M-B2	
D005	8-719-106-23	DIODE RD7.5M-B2	
< HALL ELEMENT >			
H001	1-806-118-11	ELEMENT, HALL HW-300A	
H002	1-806-118-11	ELEMENT, HALL HW-300A	
< JUMPER RESISTOR >			
JR001	1-216-256-00	METAL CHIP 0 5% 1/8W	
JR002	1-216-256-00	METAL CHIP 0 5% 1/8W	

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
JR003	1-210-296-00	METAL CHIP	0 5% 1/8W
< PHOTO TRANSISTOR >			
PT001	8-729-907-25	TRANSISTOR PT4850F	
PT002	8-729-907-25	TRANSISTOR PT4850F	
< RESISTOR >			
R001	1-216-190-00	METAL GLAZE	470 5% 1/8W
R002	1-216-190-00	METAL GLAZE	470 5% 1/8W
R003	1-216-190-00	METAL GLAZE	470 5% 1/8W
R004	1-216-190-00	METAL GLAZE	470 5% 1/8W
R005	1-216-296-00	METAL CHIP	0 5% 1/8W
< SWITCH >			
S001	1-692-497-11	SWITCH, PUSH (TAPE 2/9)	
S002	1-692-497-11	SWITCH, PUSH (TAPE 10/13)	
S003	1-692-497-11	SWITCH, PUSH (ME/MP)	
S004	1-692-497-11	SWITCH, PUSH (H18 MF)	
S005	1-692-497-11	SWITCH, PUSH (REC PROOF)	
S006	1-570-953-11	SWITCH, PUSH (1 KEY) (CC DOWN)	

* A-7063-030-A PC-61 (G) BOARD, COMPLETE			

(Ref. No. 4, 000 series)			
< CAPACITOR >			
C601	1-124-442-00	ELECT	330uF 20% 6.3V
C602	1-124-442-00	ELECT	330uF 20% 6.3V
C603	1-124-126-00	ELECT	47uF 20% 10V
C604	1-124-126-00	ELECT	47uF 20% 10V
C605	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C606	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C633	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C634	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C635	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C636	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C640	1-126-233-11	ELECT	22uF 20% 50V
C642	1-124-126-00	ELECT	47uF 20% 10V
C643	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C644	1-163-101-06	CERAMIC CHIP	22PF 5% 50V
C645	1-163-124-00	CERAMIC CHIP	200PF 5% 50V
C646	1-124-925-11	ELECT	2.2uF 20% 100V
C647	1-124-464-11	ELECT	0.22uF 20% 50V
C648	1-131-377-00	TANTALUM	10uF 10% 10V
C649	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V
C650	1-124-927-11	ELECT	4.7uF 20% 100V
C651	1-124-126-00	ELECT	47uF 20% 10V
C654	1-126-233-11	ELECT	22uF 20% 50V

Ref. No.	Part No.	Description	Remark
C657	1-124-126-00	ELECT	47uF 20% 10V
C658	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C659	1-163-101-06	CERAMIC CHIP	22PF 5% 50V
C660	1-163-124-00	CERAMIC CHIP	200PF 5% 50V
C661	1-124-925-11	ELECT	2.2uF 20% 100V
C662	1-124-464-11	ELECT	0.22uF 20% 50V
C663	1-131-377-00	TANTALUM	10uF 10% 10V
C664	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V
C665	1-124-927-11	ELECT	4.7uF 20% 100V
C666	1-124-126-00	ELECT	47uF 20% 10V
C671	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C672	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C702	1-126-233-11	ELECT	22uF 20% 50V
C703	1-126-233-11	ELECT	22uF 20% 50V
C705	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C706	1-124-538-11	ELECT	22uF 20% 10V
C707	1-124-638-11	ELECT	22uF 20% 10V
C708	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C714	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C715	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C716	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C717	1-124-638-11	ELECT	22uF 20% 10V
C718	1-126-233-11	ELECT	22uF 20% 50V
C719	1-126-233-11	ELECT	22uF 20% 50V
C731	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C733	1-163-031-11	CERAMIC CHIP	0.01uF 5% 50V
C734	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 50V
C735	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C736	1-124-638-11	ELECT	22uF 20% 10V
C737	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C738	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C739	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C740	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C741	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C742	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C743	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C744	1-163-033-00	CERAMIC CHIP	10PF 5% 50V
C745	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C746	1-163-109-00	CERAMIC CHIP	47PF 5% 50V
C747	1-163-115-00	CERAMIC CHIP	82PF 5% 50V
C748	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C749	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C750	1-124-638-11	ELECT	22uF 20% 10V
C752	1-126-157-11	ELECT	10uF 20% 16V
C755	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C756	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C757	1-124-499-11	ELECT, NONPOLAR	1uF 20% 50V
C758	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V
C759	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V

Ref. No.	Part No.	Description	Remark
C760	1-163-091-00	CERAMIC CHIP	8PF 50V
C761	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C762	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C763	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C764	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 50V
C765	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C766	1-163-137-00	CERAMIC CHIP	680PF 5% 50V
C768	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C769	1-126-177-11	ELECT	100uF 20% 10V
C771	1-126-154-11	ELECT	47uF 20% 5.3V
C772	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C773	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C774	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 50V
C776	1-163-031-11	CERAMIC CHIP	0.01uF 50V
< CONNECTOR >			
CN601	1-573-824-11	CONNECTOR, BOARD TO BOARD 10P	
CN701	1-764-054-11	CONNECTOR, BOARD TO BOARD 40P	
CN702	1-506-464-11	PIN, CONNECTOR 5P	
* CN703	1-564-013-11	PIN, CONNECTOR 3P	
< VARIABLE CAPACITOR >			
CV701	1-141-227-00	CAP, TRIMMER 20PF	
< DIODE >			
D702	8-719-409-16	DIODE MA152WK	
D703	8-713-300-88	DIODE 1T33C-01	
< FERRITE BEAD >			
FB701	1-543-256-11	BEAD, FERRITE	
< FILTER >			
FL601	1-236-043-11	FILTER, LOW PASS	
FL602	1-236-043-11	FILTER, LOW PASS	
< IC >			
IC601	8-759-300-71	IC HD140538FP	
IC602	8-759-300-71	IC HD140538FP	
IC603	8-759-924-46	IC BA4560P	
IC610	8-759-009-06	IC MC140528P	
IC614	8-759-822-92	IC LA7451M	
IC701	8-752-322-57	IC CXD1077M	
IC703	8-752-332-46	IC CXD1209Q	
IC704	8-759-009-51	IC MC145388P	
IC705	8-759-507-53	IC MS264CLL-15FC	
IC707	8-759-067-53	IC CXD2120Q	
IC708	8-752-010-20	IC CXD0102	
IC709	8-759-908-15	IC TL431CLP	

Ref. No.	Part No.	Description	Remark
< COIL >			
L704	1-408-982-11	INDUCTOR 100uH	
L705	1-408-982-11	INDUCTOR 100uH	
L706	1-408-970-21	INDUCTOR 10uH	
L707	1-408-958-21	INDUCTOR 1uH	
L708	1-412-006-31	INDUCTOR CHIP 10uH	
L753	1-216-295-00	METAL CHIP	0 5% 1/10W
L756	1-216-295-00	METAL CHIP	0 5% 1/10W
L757	1-216-295-00	METAL CHIP	0 5% 1/10W
L758	1-216-295-00	METAL CHIP	0 5% 1/10W
L759	1-216-295-00	METAL CHIP	0 5% 1/10W
L760	1-216-295-00	METAL CHIP	0 5% 1/10W
L761	1-216-295-00	METAL CHIP	0 5% 1/10W
L762	1-216-295-00	METAL CHIP	0 5% 1/10W
L763	1-216-295-00	METAL CHIP	0 5% 1/10W
L764	1-216-295-00	METAL CHIP	0 5% 1/10W
L766	1-216-295-00	METAL CHIP	0 5% 1/10W
L767	1-216-295-00	METAL CHIP	0 5% 1/10W
L774	1-216-295-00	METAL CHIP	0 5% 1/10W
L775	1-216-295-00	METAL CHIP	0 5% 1/10W
L776	1-216-295-00	METAL CHIP	0 5% 1/10W
L777	1-216-295-00	METAL CHIP	0 5% 1/10W
L778	1-216-295-00	METAL CHIP	0 5% 1/10W
L779	1-216-295-00	METAL CHIP	0 5% 1/10W
L780	1-216-295-00	METAL CHIP	0 5% 1/10W
L781	1-216-295-00	METAL CHIP	0 5% 1/10W
L784	1-216-295-00	METAL CHIP	0 5% 1/10W
L785	1-216-295-00	METAL CHIP	0 5% 1/10W
L786	1-216-295-00	METAL CHIP	0 5% 1/10W
< TRANSISTOR >			
Q703	8-729-402-19	TRANSISTOR XN6501	
Q704	8-729-421-19	TRANSISTOR UN2213	
Q705	8-729-402-19	TRANSISTOR XN6501	
Q706	8-729-010-25	TRANSISTOR MS0601-RT1	
Q708	8-729-501-06	TRANSISTOR DTAL44EK	
Q711	8-729-421-19	TRANSISTOR UN2213	
< RESISTOR >			
R601	1-216-679-11	METAL CHIP	15K 0.5% 1/10W
R602	1-216-679-11	METAL CHIP	15K 0.5% 1/10W
R603	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
R604	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
R605	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
R606	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
R607	1-216-683-11	METAL CHIP	22K 0.5% 1/10W
R608	1-216-683-11	METAL CHIP	22K 0.5% 1/10W
R609	1-216-651-11	METAL CHIP	1K 0.5% 1/10W

Ref. No.	Part No.	Description	Remark
R640	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R641	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R612	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R638	1-218-295-00	METAL CHIP	0 5% 1/10W
R641	1-218-663-11	METAL CHIP	3.3K 0.5% 1/10W
R642	1-218-663-11	METAL CHIP	3.3K 0.5% 1/10W
R645	1-218-663-11	METAL CHIP	3.9K 0.5% 1/10W
R646	1-218-665-11	METAL CHIP	3.9K 0.5% 1/10W
R647	1-218-678-11	METAL CHIP	13K 0.5% 1/10W
R648	1-218-678-11	METAL CHIP	13K 0.5% 1/10W
R651	1-218-754-11	METAL GLAZE	120K 2% 1/10W
R655	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R656	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R657	1-218-675-11	METAL CHIP	10K 0.5% 1/10W
R658	1-218-675-11	METAL CHIP	10K 0.5% 1/10W
R659	1-218-687-11	METAL CHIP	33K 0.5% 1/10W
R660	1-218-687-11	METAL CHIP	33K 0.5% 1/10W
R661	1-218-675-11	METAL CHIP	10K 0.5% 1/10W
R662	1-218-675-11	METAL CHIP	10K 0.5% 1/10W
R663	1-218-675-11	METAL CHIP	10K 0.5% 1/10W
R664	1-218-675-11	METAL CHIP	10K 0.5% 1/10W
R665	1-218-627-11	METAL CHIP	100 0.5% 1/10W
R666	1-218-627-11	METAL CHIP	100 0.5% 1/10W
R701	1-218-628-00	METAL CHIP	150 5% 1/10W
R702	1-218-653-11	METAL CHIP	1.2K 0.5% 1/10W
R703	1-218-661-11	METAL CHIP	2.7K 0.5% 1/10W
R704	1-218-622-00	METAL CHIP	75 5% 1/10W
R705	1-218-639-00	METAL CHIP	390 5% 1/10W
R706	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R707	1-218-677-00	METAL CHIP	15K 5% 1/10W
R708	1-218-688-11	METAL CHIP	39K 0.5% 1/10W
R712	1-218-677-00	METAL CHIP	15K 5% 1/10W
R713	1-218-688-11	METAL CHIP	39K 0.5% 1/10W
R717	1-218-117-00	METAL CHIP	680K 5% 1/10W
R718	1-218-105-00	METAL CHIP	220K 5% 1/10W
R720	1-218-073-00	METAL CHIP	10K 5% 1/10W
R721	1-218-101-00	METAL CHIP	150K 5% 1/10W
R723	1-218-097-00	METAL CHIP	100K 5% 1/10W
R726	1-218-073-00	METAL CHIP	10K 5% 1/10W
R727	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R729	1-218-295-00	METAL CHIP	0 5% 1/10W
R738	1-218-617-00	METAL CHIP	47 5% 1/10W
R739	1-218-845-11	METAL CHIP	560 0.5% 1/10W
R740	1-218-051-00	METAL CHIP	1.2K 5% 1/10W
R743	1-218-073-00	METAL CHIP	10K 5% 1/10W
R746	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R747	1-218-073-00	METAL CHIP	10K 5% 1/10W
R748	1-218-073-00	METAL CHIP	10K 5% 1/10W
R749	1-218-651-11	METAL CHIP	1K 0.5% 1/10W

Ref. No.	Part No.	Description	Remark
R750	1-218-073-00	METAL CHIP	10K 5% 1/10W
R751	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R752	1-218-057-00	METAL CHIP	2.2K 5% 1/10W
R753	1-218-081-00	METAL CHIP	22K 5% 1/10W
R754	1-218-073-00	METAL CHIP	10K 5% 1/10W
R755	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R756	1-218-627-11	METAL CHIP	100 0.5% 1/10W
R757	1-218-037-00	METAL CHIP	330 5% 1/10W
R758	1-218-029-00	METAL CHIP	150 5% 1/10W
R759	1-218-045-00	METAL CHIP	680 5% 1/10W
R760	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R761	1-218-077-00	METAL CHIP	15K 5% 1/10W
R762	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R763	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R764	1-218-651-11	METAL CHIP	1K 0.5% 1/10W
R767	1-218-057-00	METAL CHIP	2.2K 5% 1/10W
R772	1-218-097-00	METAL CHIP	100K 5% 1/10W
R777	1-218-295-00	METAL CHIP	0 5% 1/10W
R778	1-218-295-00	METAL CHIP	0 5% 1/10W
R780	1-218-045-00	METAL CHIP	680 5% 1/10W
R789	1-218-105-00	METAL CHIP	220K 5% 1/10W
R790	1-218-687-11	METAL CHIP	33K 0.5% 1/10W
R791	1-218-687-11	METAL CHIP	33K 0.5% 1/10W
R794	1-218-097-00	METAL CHIP	100K 5% 1/10W
R797	1-218-097-00	METAL CHIP	100K 5% 1/10W
R798	1-218-055-00	METAL CHIP	4.7K 5% 1/10W
R799	1-218-028-00	METAL CHIP	150 5% 1/10W

< VARIABLE RESISTOR >

RV701 1-238-857-11 RES. ADJ. CERMET 22K
 RV702 1-238-857-11 RES. ADJ. CERMET 22K
 RV703 1-238-851-11 RES. ADJ. CERMET 470K
 RV705 1-238-851-11 RES. ADJ. CERMET 470K

PS-316

Ref. No.	Part No.	Description	Remark
*	A-7053-939-A	PS-316 (G) BOARD, COMPLETE ***** (Ref. No 8, 000 series)	
		1-251-134-11 INLET, AC (NONPOLAR)	
		1-533-183-11 HOLDER, FUSE	
		7-685-646-79 SCREW +BVP 3X8 TYPE2 IT-3	
		7-685-647-79 SCREW +BVP 3X10 TYPE2 IT-3	
		< CAPACITOR >	
△C001	1-137-524-11	FILM	0.22uF 20% 250V
△C002	1-181-742-00	CERAMIC	0.0022uF 20% 400V
△C003	1-181-742-00	CERAMIC	0.0022uF 20% 400V
△C004	1-181-741-00	CERAMIC	0.001uF 10% 400V
C006	1-137-525-11	FILM	0.1uF 20% 250V
C007	1-126-538-11	ELECT	100uF 20% 400V
C008	1-181-742-00	CERAMIC	0.0022uF 20% 400V
△C009	1-181-742-00	CERAMIC	0.0022uF 20% 400V
C011	1-136-208-11	FILM	0.068uF 10% 630V
C012	1-128-068-11	ELECT	56uF 20% 35V
C013	1-184-143-11	CERAMIC	0.001uF 10% 1KV
C014	1-130-477-00	MYLAR	0.0033uF 5% 50V
C015	1-126-933-11	ELECT	100uF 20% 10V
C016	1-130-467-00	MYLAR	470PF 5% 50V
C017	1-126-964-11	ELECT	10uF 20% 50V
C018	1-136-163-00	MYLAR	0.068uF 10% 50V
C019	1-136-185-00	MYLAR	0.1uF 10% 50V
C020	1-128-449-11	ELECT	0.001F 20% 10V
C021	1-128-496-11	ELECT	470uF 20% 10V
C022	1-128-246-11	ELECT	2700uF 20% 10V
C024	1-128-449-11	ELECT	0.001F 20% 10V
C025	1-126-964-11	ELECT	10uF 20% 50V
C026	1-126-589-11	ELECT	220uF 20% 16V
C027	1-126-183-11	ELECT	1000uF 20% 16V
C042	1-130-467-00	MYLAR	470PF 5% 50V
		< CONNECTOR >	
* CNO02	1-560-897-00	PIN, CONNECTOR 9P	
* CNO03	1-560-900-00	PIN, CONNECTOR 12P	
		< DIODE >	
△D001	8-719-510-14	DIODE S2VB80	
D002	8-719-018-55	DIODE ES1F-N	
D003	8-719-313-17	DIODE A002A-V0	
D004	8-719-313-17	DIODE A002A-V0	
D005	8-719-313-17	DIODE A002A-V0	
D006	8-719-911-18	DIODE 1SS119	
D007	8-719-043-76	DIODE AR04V0	
D010	8-719-043-76	DIODE AR04V0	
D011	8-719-109-88	DIODE RDS. 6ES-B2	

Ref. No.	Part No.	Description	Remark
D012	8-719-043-71	DIODE FMB-24	
D013	8-719-043-71	DIODE FMB-24	
		< FUSE >	
△F001	1-578-228-11	FUSE (H.R.C.)	
		< IC >	
△IC001	8-758-197-67	IC STR-M6552	
△IC002	8-748-923-50	IC PHOTO COUPLER PC111LS	
IC003	8-758-908-15	IC TL431CLP	
IC004	8-758-908-15	IC TL431CLP	
IC005	8-758-069-28	IC PQ05RF11	
		< COIL >	
△L002	1-406-912-11	COIL, LINE FILTER	
L003	1-412-525-31	INDUCTOR 10uH	
L004	1-412-525-31	INDUCTOR 10uH	
L006	1-412-533-21	INDUCTOR 47uH	
		< IC LINK >	
△PS001	1-532-984-11	LINK, IC	
		< TRANSISTOR >	
Q001	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q003	8-729-140-93	TRANSISTOR 2SB733-34	
Q004	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q005	8-729-801-93	TRANSISTOR 2SD1387-3	
		< RESISTOR >	
R002	1-260-127-51	CARBON 220K 5% 1/2W	
R004	1-249-415-11	CARBON 680 5% 1/4W F	
R005	1-249-426-11	CARBON 5.6K 5% 1/4W	
R006	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R007	1-249-417-11	CARBON 1K 5% 1/4W F	
R008	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R009	1-207-620-00	WIREWOUND 1 10% 2W F	
R010	1-249-435-11	CARBON 33K 5% 1/4W	
R011	1-249-429-11	CARBON 10K 5% 1/4W	
R012	1-249-435-11	CARBON 33K 5% 1/4W	
R014	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R015	1-249-402-11	CARBON 56 5% 1/4W F	
R016	1-249-417-11	CARBON 1K 5% 1/4W F	
R017	1-215-431-00	METAL 2.7K 1% 1/6W	
R018	1-215-411-00	METAL 390 1% 1/6W	
R019	1-215-429-00	METAL 2.2K 1% 1/6W	
△R021	1-219-162-11	FUSIBLE 3.3 5% 1/4W F	
R022	1-215-863-11	METAL OXIDE 100 5% 1W F	
R023	1-249-404-00	CARBON 82 5% 1/4W	
R024	1-215-429-00	METAL 2.2K 1% 1/6W	

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Ref. No.	Part No.	Description	Remark
R025	1-215-426-00	METAL	2.2K 1% 1/4W
R026	1-249-427-11	CARBON	3.3K 5% 1/4W F
R027	1-247-706-11	CARBON	330 5% 1/4W F
R028	1-249-429-11	CARBON	10K 5% 1/4W
R047	1-249-395-11	CARBON	15 5% 1/4W F
R048	1-249-425-11	CARBON	4.7K 5% 1/4W F
R061	1-249-415-11	CARBON	680 5% 1/4W F
R063	1-215-926-11	METAL OXIDE	100K 5% 3W F
R064	1-215-926-11	METAL OXIDE	100K 5% 3W F
< TRANSFORMER >			
△T001	1-426-715-11	TRANSFORMER, CONVERTER	

*	A-7063-758-A	RP-165 BOARD, COMPLETE	

(Ref. No 1,000 series)			
*	3-955-621-01	CASE (MAIN), SHIELD, RP	
< CAPACITOR >			
C001	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C002	1-163-224-11	CERAMIC CHIP	7PF 0.25PF 50V
C003	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C004	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C005	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C006	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C007	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C008	1-163-239-11	CERAMIC CHIP	33PF 5% 50V
C009	1-163-091-00	CERAMIC CHIP	8PF 50V
C010	1-126-157-11	ELECT	10uF 20% 16V
C011	1-164-534-11	CERAMIC CHIP	1uF 16V
C012	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V
C013	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C014	1-164-534-11	CERAMIC CHIP	1uF 16V
C015	1-126-157-11	ELECT	10uF 20% 16V
C016	1-163-222-11	CERAMIC CHIP	5PF 0.25PF 50V
C017	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C018	1-124-234-00	ELECT	22uF 20% 16V
C019	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C020	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C021	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C022	1-163-224-11	CERAMIC CHIP	7PF 0.25PF 50V
C023	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C024	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C025	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C026	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C027	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C028	1-163-239-11	CERAMIC CHIP	33PF 5% 50V
C029	1-163-224-11	CERAMIC CHIP	7PF 0.25PF 50V

Ref. No.	Part No.	Description	Remark
C030	1-126-154-11	ELECT	47uF 20% 6.3V
C031	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C032	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V
C033	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C034	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C035	1-126-157-11	ELECT	10uF 20% 16V
C036	1-163-222-11	CERAMIC CHIP	5PF 0.25PF 50V
C037	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C038	1-126-157-11	ELECT	10uF 20% 16V
C039	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C040	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C041	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C042	1-126-157-11	ELECT	10uF 20% 16V
C043	1-127-558-11	ELECT(SOLID)	10uF 20% 16V
C044	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C054	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C055	1-163-249-11	CERAMIC CHIP	82PF 5% 50V
C056	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C057	1-163-121-00	CERAMIC CHIP	150PF 5% 50V
C059	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C060	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C061	1-182-507-11	CERAMIC CHIP	0.039uF 10% 25V
C062	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C063	1-184-004-11	CERAMIC CHIP	0.1uF 10% 25V
C064	1-163-031-11	CERAMIC CHIP	0.01uF 50V
< CONNECTOR >			
CN001	1-506-487-11	PIN, CONNECTOR 8P	
CN002	1-601-053-21	INDUSING, CONNECTOR 21P	
CN003	1-566-545-41	CONNECTOR, FPC (NON ZIF) 13P	
< DIODE >			
D001	8-719-404-46	DIODE MALLIO	
D002	8-719-404-46	DIODE MALLIO	
D003	8-719-404-46	DIODE MALLIO	
D004	8-719-404-46	DIODE MALLIO	
< IC >			
IC001	8-752-003-44	IC CX20034	
< COIL >			
L001	1-408-948-80	INDUCTOR 220uH	
L002	1-408-973-21	INDUCTOR 18uH	
L003	1-408-982-11	INDUCTOR 100uH	
L004	1-408-974-21	INDUCTOR 22uH	
L006	1-408-973-21	INDUCTOR 18uH	
L008	1-408-970-21	INDUCTOR 10uH	

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RP-165
SW-227

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			
Q001	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q002	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q003	8-729-421-18	TRANSISTOR UM2213	
Q004	8-729-420-12	TRANSISTOR XM4213	
Q006	8-729-010-05	TRANSISTOR MSB709-RT1	
Q007	8-729-010-05	TRANSISTOR MSB709-RT1	
Q008	8-729-010-05	TRANSISTOR MSB709-RT1	
Q009	8-729-402-84	TRANSISTOR XM4601	
Q010	8-729-010-25	TRANSISTOR MSD601-RT1	
Q011	8-729-420-20	TRANSISTOR XM4312	
Q017	8-729-010-25	TRANSISTOR MSD601-RT1	
Q018	8-729-010-25	TRANSISTOR MSD601-RT1	
Q020	8-729-421-19	TRANSISTOR UM2213	
< RESISTOR >			
R001	1-216-977-00	METAL CHIP 15K 5% 1/10W	
R002	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R003	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R004	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R005	1-216-669-11	METAL CHIP 39K 0.5% 1/10W	
R006	1-216-688-11	METAL CHIP 39K 0.5% 1/10W	
R007	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R008	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R009	1-216-001-00	METAL CHIP 10 5% 1/10W	
R010	1-216-031-00	METAL CHIP 180 5% 1/10W	
R011	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R012	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R013	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R014	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R015	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R016	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R017	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R018	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R019	1-216-001-00	METAL CHIP 10 5% 1/10W	
R020	1-216-031-00	METAL CHIP 180 5% 1/10W	
R021	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R022	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R023	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R024	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R025	1-216-683-11	METAL CHIP 22K 0.5% 1/10W	
R026	1-216-688-11	METAL CHIP 30K 0.5% 1/10W	
R028	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R029	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R040	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R041	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R042	1-216-035-00	METAL CHIP 270 5% 1/10W	
R043	1-216-033-00	METAL CHIP 220 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R044	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R045	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R046	1-216-021-00	METAL CHIP 68 5% 1/10W	
R047	1-216-017-00	METAL CHIP 47 5% 1/10W	
R049	1-216-043-00	METAL CHIP 560 5% 1/10W	
R049	1-216-086-00	METAL GLAZE 36K 5% 1/10W	
R050	1-216-088-00	METAL CHIP 6.8K 5% 1/10W	
R051	1-216-072-00	METAL CHIP 9.1K 5% 1/10W	
R052	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R053	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R054	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R055	1-216-048-00	METAL CHIP 910 5% 1/10W	
R056	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R057	1-216-025-00	METAL CHIP 100 5% 1/10W	
R058	1-216-025-00	METAL CHIP 100 5% 1/10W	
R064	1-216-025-00	METAL CHIP 100 5% 1/10W	
R067	1-216-025-00	METAL CHIP 100 5% 1/10W	
R070	1-216-295-00	METAL CHIP 0 5% 1/10W	
R071	1-216-295-00	METAL CHIP 0 5% 1/10W	
R072	1-216-039-00	METAL CHIP 390 5% 1/10W	
R073	1-216-021-00	METAL CHIP 68 5% 1/10W	
R074	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R075	1-216-085-00	METAL CHIP 4.7K 5% 1/10W	
R076	1-216-025-00	METAL CHIP 100 5% 1/10W	
R080	1-216-087-11	METAL CHIP 33K 0.5% 1/10W	
< VARIABLE RESISTOR >			
RV001	1-230-720-11	RES. ADJ. CARBON 4.7K	
RV002	1-230-720-11	RES. ADJ. CARBON 4.7K	

* 1-850-413-11 SW-227 BOARD			

(Ref. No 7,000 series)			
< CONNECTOR >			
CN601	1-564-013-11	PIN, CONNECTOR 3P	
< ROTARY SWITCH >			
S601	1-571-300-21	SWITCH, ROTARY	

Ref. No.	Part No.	Description	Remark
*	A-7063-940-A	TC-30 (G) BOARD, COMPLETE (VC,NP)	
*	A-7063-995-A	TC-30 (F) BOARD, COMPLETE (B)	

(Ref.No 9,000 series)			
1-751-606-11 CABLE, FLAT (FMT-5)			
< CAPACITOR >			
C001	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C002	1-126-233-11	ELECT	22uF 20% 50V
C003	1-126-233-11	ELECT	22uF 20% 50V
C005	1-163-234-11	CERAMIC CHIP	20PF 5% 50V
C006	1-163-319-11	CERAMIC CHIP	0.1uF 50V
C008	1-163-102-00	CERAMIC CHIP	24PF 5% 50V
C013	1-163-124-00	CERAMIC CHIP	200PF 5% 50V
C014	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V
C015	1-163-249-11	CERAMIC CHIP	82PF 5% 50V
C016	1-124-638-11	ELECT	22uF 20% 10V
C017	1-126-233-11	ELECT	22uF 20% 50V
C018	1-124-638-11	ELECT	22uF 20% 10V
C020	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C021	1-163-319-11	CERAMIC CHIP	0.1uF 50V
C022	1-163-319-11	CERAMIC CHIP	0.1uF 50V
C023	1-124-443-00	ELECT	100uF 20% 10V
C024	1-124-443-00	ELECT	100uF 20% 10V
C025	1-126-233-11	ELECT	22uF 20% 50V
C031	1-163-031-11	CERAMIC CHIP	0.01uF 50V (B)
C032	1-163-257-11	CERAMIC CHIP	180PF 5% 50V
C034	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C035	1-163-319-11	CERAMIC CHIP	0.1uF 50V
C036	1-163-319-11	CERAMIC CHIP	0.1uF 50V
C037	1-124-443-00	ELECT	100uF 20% 10V
C038	1-124-443-00	ELECT	100uF 20% 10V
C041	1-163-031-11	CERAMIC CHIP	0.01uF 50V (B)
C042	1-163-117-00	CERAMIC CHIP	100PF 5% 50V (B)
C043	1-163-035-00	CERAMIC CHIP	0.047uF 50V (B)
C044	1-163-031-11	CERAMIC CHIP	0.01uF 50V (B)
C045	1-124-907-11	ELECT	10uF 20% 50V (B)
C046	1-163-133-00	CERAMIC CHIP	470PF 5% 50V (B)
C047	1-124-907-11	ELECT	10uF 20% 50V (B)
C049	1-163-118-00	CERAMIC CHIP	110PF 5% 50V (B)
C050	1-163-118-00	CERAMIC CHIP	110PF 5% 50V (B)
C051	1-163-103-00	CERAMIC CHIP	27PF 5% 50V (B)
C052	1-163-103-00	CERAMIC CHIP	27PF 5% 50V (B)
C053	1-163-319-11	CERAMIC CHIP	0.1uF 50V (B)
C054	1-163-319-11	CERAMIC CHIP	0.1uF 50V (B)
C055	1-124-907-11	ELECT	10uF 20% 50V (B)
C057	1-163-017-00	CERAMIC CHIP	0.0647uF 5% 50V (B)
C058	1-124-907-11	ELECT	10uF 20% 50V (B)

Ref. No.	Part No.	Description	Remark
C059	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V (B)
C061	1-124-927-11	ELECT	4.7uF 20% 100V (B)
C062	1-124-903-11	ELECT	1uF 20% 50V (B)
C063	1-163-035-00	CERAMIC CHIP	0.047uF 50V (B)
C065	1-124-907-11	ELECT	10uF 20% 50V (B)
C067	1-163-105-00	CERAMIC CHIP	33PF 5% 50V (B)
C068	1-163-123-00	CERAMIC CHIP	180PF 5% 50V (B)
C069	1-163-105-00	CERAMIC CHIP	33PF 5% 50V (B)
C070	1-163-123-00	CERAMIC CHIP	180PF 5% 50V (B)
C073	1-163-031-11	CERAMIC CHIP	0.01uF 50V (B)
C074	1-163-275-11	CERAMIC CHIP	0.001uF 5% 50V (B)
C075	1-163-125-00	CERAMIC CHIP	220PF 5% 50V (B)
C076	1-163-121-00	CERAMIC CHIP	150PF 5% 50V (B)
C078	1-163-125-00	CERAMIC CHIP	220PF 5% 50V (B)
C079	1-124-903-11	ELECT	1uF 20% 50V (B)
C080	1-124-903-11	ELECT	1uF 20% 50V (B)
C081	1-104-852-11	TANTAL. CHIP	22uF 20% 6.3V (B)
C082	1-135-157-21	TANTALUM CHIP	10uF 20% 6.3V (B)
C083	1-163-031-11	CERAMIC CHIP	0.01uF 50V (B)
C084	1-163-031-11	CERAMIC CHIP	0.01uF 50V (B)
C085	1-126-233-11	ELECT	22uF 20% 50V (B)
C089	1-163-097-00	CERAMIC CHIP	15PF 5% 50V (B)
C090	1-163-097-00	CERAMIC CHIP	15PF 5% 50V
C091	1-163-257-11	CERAMIC CHIP	180PF 5% 50V
C093	1-163-245-11	CERAMIC CHIP	56PF 5% 50V
C094	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C095	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C096	1-163-319-11	CERAMIC CHIP	0.1uF 50V
C097	1-163-319-11	CERAMIC CHIP	0.1uF 50V
< CONNECTOR >			
* CN001	1-691-047-21	HOUSING, CONNECTOR 15P	
CN002	1-506-457-11	PIN, CONNECTOR 2P	
< DIODE >			
D001	8-719-801-78	DIODE 1SS184 (B)	
< DELAY LINE >			
DL001	1-415-313-00	DELAY LINE (1H) (B)	
< IC >			
IC002	8-759-900-71	IC HD140538FP	
IC003	8-752-035-00	IC CXA1227Q (B)	
IC004	8-752-034-04	IC CXA1219M (B)	

Ref. No.	Part No.	Description	Remark
< JUMPER RESISTOR >			
JR001	1-216-295-00	METAL CHIP	0 5% 1/10W
JR002	1-216-296-00	METAL CHIP	0 5% 1/8W
JR003	1-216-295-00	METAL CHIP	0 5% 1/10W
JR004	1-216-295-00	METAL CHIP	0 5% 1/8W
JR005	1-216-296-00	METAL CHIP	0 5% 1/8W
JR006	1-216-295-00	METAL CHIP	0 5% 1/8W
JR007	1-216-296-00	METAL CHIP	0 5% 1/8W
JR008	1-216-296-00	METAL CHIP	0 5% 1/8W
JR009	1-216-295-00	METAL CHIP	0 5% 1/10W
JR010	1-216-296-00	METAL CHIP	0 5% 1/8W
JR011	1-216-295-00	METAL CHIP	0 5% 1/8W
JR012	1-216-295-00	METAL CHIP	0 5% 1/10W
JR013	1-216-295-00	METAL CHIP	0 5% 1/10W
JR014	1-216-296-00	METAL CHIP	0 5% 1/8W
JR015	1-216-295-00	METAL CHIP	0 5% 1/10W
JR016	1-216-295-00	METAL CHIP	0 5% 1/10W
JR017	1-216-295-00	METAL CHIP	0 5% 1/10W
JR018	1-216-295-00	METAL CHIP	0 5% 1/10W
JR021	1-216-296-00	METAL CHIP	0 5% 1/8W
JR023	1-216-296-00	METAL CHIP	0 5% 1/8W
JR024	1-216-295-00	METAL CHIP	0 5% 1/10W
JR025	1-216-295-00	METAL CHIP	0 5% 1/10W
JR026	1-216-296-00	METAL CHIP	0 5% 1/8W
JR027	1-216-295-00	METAL CHIP	0 5% 1/10W
JR028	1-216-295-00	METAL CHIP	0 5% 1/10W
JR030	1-216-296-00	METAL CHIP	0 5% 1/8W
JR031	1-216-296-00	METAL CHIP	0 5% 1/8W
JR032	1-216-295-00	METAL CHIP	0 5% 1/10W
JR033	1-216-296-00	METAL CHIP	0 5% 1/8W
JR034	1-216-296-00	METAL CHIP	0 5% 1/8W
JR035	1-216-296-00	METAL CHIP	0 5% 1/8W
JR036	1-216-296-00	METAL CHIP	0 5% 1/8W
JR037	1-216-295-00	METAL CHIP	0 5% 1/8W
JR038	1-216-295-00	METAL CHIP	0 5% 1/10W
JR039	1-216-295-00	METAL CHIP	0 5% 1/10W
JR040	1-216-295-00	METAL CHIP	0 5% 1/8W
JR041	1-216-296-00	METAL CHIP	0 5% 1/8W
JR042	1-216-296-00	METAL CHIP	0 5% 1/8W
JR043	1-216-295-00	METAL CHIP	0 5% 1/10W
JR044	1-216-295-00	METAL CHIP	0 5% 1/10W
JR045	1-216-296-00	METAL CHIP	0 5% 1/8W
JR046	1-216-296-00	METAL CHIP	0 5% 1/8W
JR047	1-216-296-00	METAL CHIP	0 5% 1/8W
JR048	1-216-296-00	METAL CHIP	0 5% 1/8W
JR049	1-216-296-00	METAL CHIP	0 5% 1/8W
JR050	1-216-296-00	METAL CHIP	0 5% 1/8W
JR051	1-216-296-00	METAL CHIP	0 5% 1/8W

Ref. No.	Part No.	Description	Remark
JR052	1-216-296-00	METAL CHIP	0 5% 1/8W
JR053	1-216-296-00	METAL CHIP	0 5% 1/8W
JR054	1-216-296-00	METAL CHIP	0 5% 1/8W
JR055	1-216-295-00	METAL CHIP	0 5% 1/10W
JR056	1-216-295-00	METAL CHIP	0 5% 1/10W
JR057	1-216-295-00	METAL CHIP	0 5% 1/10W
JR060	1-216-295-00	METAL CHIP	0 5% 1/10W
JR061	1-216-296-00	METAL CHIP	0 5% 1/8W
JR063	1-216-295-00	METAL CHIP	0 5% 1/10W
JR064	1-216-296-00	METAL CHIP	0 5% 1/8W
JR065	1-216-295-00	METAL CHIP	0 5% 1/10W
JR066	1-216-295-00	METAL CHIP	0 5% 1/10W
JR068	1-216-295-00	METAL CHIP	0 5% 1/8W
JR069	1-216-296-00	METAL CHIP	0 5% 1/8W
JR072	1-216-296-00	METAL CHIP	0 5% 1/8W
JR093	1-216-296-00	METAL CHIP	0 5% 1/8W
JR094	1-216-296-00	METAL CHIP	0 5% 1/8W
< COIL >			
L001	1-410-390-11	INDUCTOR CHIP 56uH	
L002	1-410-393-11	INDUCTOR CHIP 100uH	
L003	1-410-390-11	INDUCTOR CHIP 56uH	
L004	1-410-391-11	INDUCTOR CHIP 68uH	
L005	1-408-418-00	INDUCTOR 56uH	
L006	1-408-413-00	INDUCTOR 22uH	
L007	1-408-413-00	INDUCTOR 22uH	
L008	1-410-390-11	INDUCTOR CHIP 56uH	
L010	1-408-408-00	INDUCTOR 8.2uH (B)	
L011	1-408-408-00	INDUCTOR 8.2uH (B)	
L012	1-408-410-00	INDUCTOR 12uH (B)	
L013	1-408-410-00	INDUCTOR 12uH (B)	
L014	1-408-409-00	INDUCTOR 10uH (B)	
L015	1-408-409-00	INDUCTOR 10uH (B)	
L024	1-410-392-11	INDUCTOR CHIP 82uH	
L025	1-410-379-31	INDUCTOR CHIP 6.8uH	
L026	1-410-385-11	INDUCTOR CHIP 22uH	
< VARIABLE COIL >			
LV001	1-408-530-00	COIL, VARIABLE (B)	
LV002	1-408-532-00	COIL, VARIABLE (B)	
LV003	1-408-532-00	COIL, VARIABLE (B)	
< TRANSISTOR >			
Q001	8-729-010-25	TRANSISTOR MSD601-RT1	
Q002	8-729-010-25	TRANSISTOR MSD601-RT1	
Q003	8-729-010-25	TRANSISTOR MSD601-RT1	
Q005	8-729-010-25	TRANSISTOR MSD601-RT1	
Q006	8-729-010-25	TRANSISTOR MSD601-RT1	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q007	8-729-010-25	TRANSISTOR	MSD601-RT1	R031	1-216-081-00	METAL CHIP	22K 5% 1/10W
Q009	8-729-010-25	TRANSISTOR	MSD601-RT1	R032	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
Q010	8-729-010-25	TRANSISTOR	MSD601-RT1	R033	1-216-295-00	METAL CHIP	0 5% 1/10W
Q013	8-729-421-19	TRANSISTOR	UM2213 (B)	R034	1-216-295-00	METAL CHIP	0 5% 1/10W (VC)
Q014	8-729-010-25	TRANSISTOR	MSD601-RT1 (B)	R042	1-216-089-91	METAL GLAZE	47K 5% 1/10W (B)
Q015	8-729-010-25	TRANSISTOR	MSD601-RT1 (B)	R043	1-216-065-00	METAL CHIP	4.7K 5% 1/10W (B)
Q016	8-729-010-25	TRANSISTOR	MSD601-RT1 (B)	R044	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q017	8-729-010-25	TRANSISTOR	MSD601-RT1	R045	1-216-065-00	METAL CHIP	4.7K 5% 1/10W (B)
Q019	8-729-010-25	TRANSISTOR	MSD601-RT1	R047	1-216-055-00	METAL CHIP	1.8K 5% 1/10W (B)
Q021	8-729-010-25	TRANSISTOR	MSD601-RT1 (B)	R048	1-216-051-00	METAL CHIP	1.2K 5% 1/10W (B)
Q022	8-729-010-25	TRANSISTOR	MSD601-RT1 (B)	R049	1-216-043-00	METAL CHIP	560 5% 1/10W (B)
Q023	8-729-010-25	TRANSISTOR	MSD601-RT1 (B)	R050	1-216-057-00	METAL CHIP	2.2K 5% 1/10W (B)
Q024	8-729-010-25	TRANSISTOR	MSD601-RT1 (B)	R051	1-216-081-00	METAL CHIP	22K 5% 1/10W (B)
Q025	8-729-010-25	TRANSISTOR	MSD601-RT1	R052	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q026	8-729-010-25	TRANSISTOR	MSD601-RT1	R053	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q027	8-729-010-25	TRANSISTOR	MSD601-RT1	R058	1-216-295-00	METAL CHIP	0 5% 1/10W (B)
Q028	8-729-901-06	TRANSISTOR	PTA144EK (B)	R058	1-216-081-00	METAL CHIP	22K 5% 1/10W
Q029	8-729-421-19	TRANSISTOR	UM2213	R059	1-216-025-00	METAL CHIP	100 5% 1/10W
Q030	8-729-421-19	TRANSISTOR	UM2213 (B)	R060	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
Q031	8-729-421-19	TRANSISTOR	UM2213 (B)	R071	1-216-057-00	METAL CHIP	2.2K 5% 1/10W (B)
< RESISTOR >				R073	1-216-081-00	METAL CHIP	22K 5% 1/10W (B)
R001	1-216-081-00	METAL CHIP	22K 5% 1/10W	R074	1-216-039-00	METAL CHIP	390 5% 1/10W (B)
R002	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R075	1-216-039-00	METAL CHIP	390 5% 1/10W (B)
R003	1-216-041-00	METAL CHIP	470 5% 1/10W	R077	1-216-073-00	METAL CHIP	10K 5% 1/10W (B)
R004	1-216-055-00	METAL CHIP	1.8K 5% 1/10W	R078	1-216-039-00	METAL CHIP	390 5% 1/10W (B)
R005	1-216-051-00	METAL CHIP	1.2K 5% 1/10W	R079	1-216-039-00	METAL CHIP	390 5% 1/10W (B)
R006	1-216-081-00	METAL CHIP	22K 5% 1/10W	R080	1-216-121-00	METAL CHIP	1M 5% 1/10W (B)
R008	1-216-295-00	METAL CHIP	0 5% 1/10W	R081	1-216-079-00	METAL CHIP	18K 5% 1/10W (B)
R009	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R082	1-216-095-00	METAL CHIP	4.7K 5% 1/10W (B)
R010	1-216-049-00	METAL CHIP	1K 5% 1/10W	R083	1-216-128-11	METAL GLAZE	2M 5% 1/10W (B)
R011	1-216-049-00	METAL CHIP	1K 5% 1/10W	R084	1-216-097-00	METAL CHIP	100K 5% 1/10W (B)
R014	1-216-045-00	METAL CHIP	680 5% 1/10W	R086	1-216-077-00	METAL CHIP	15K 5% 1/10W (B)
R015	1-216-045-00	METAL CHIP	680 5% 1/10W	R087	1-216-060-00	METAL GLAZE	3K 5% 1/10W (B)
R016	1-216-049-00	METAL CHIP	1K 5% 1/10W	R088	1-216-060-00	METAL GLAZE	3K 5% 1/10W (B)
R017	1-216-045-00	METAL CHIP	680 5% 1/10W	R089	1-216-067-00	METAL CHIP	5.6K 5% 1/10W (B)
R018	1-216-045-00	METAL CHIP	680 5% 1/10W	R090	1-216-067-00	METAL CHIP	5.6K 5% 1/10W (B)
R019	1-216-047-00	METAL CHIP	820 5% 1/10W	R091	1-216-285-00	METAL CHIP	0 5% 1/10W (B)
R020	1-216-081-00	METAL CHIP	22K 5% 1/10W	R092	1-216-285-00	METAL CHIP	0 5% 1/10W (B)
R021	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	R093	1-216-295-00	METAL CHIP	0 5% 1/10W (B)
R022	1-216-081-00	METAL CHIP	22K 5% 1/10W	R094	1-216-077-00	METAL CHIP	15K 5% 1/10W (B)
R023	1-216-295-00	METAL CHIP	0 5% 1/10W	R095	1-216-049-00	METAL CHIP	1K 5% 1/10W (B)
R024	1-216-295-00	METAL CHIP	0 5% 1/10W	R096	1-216-295-00	METAL CHIP	0 5% 1/10W (B)
R025	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	R097	1-216-049-00	METAL CHIP	1K 5% 1/10W (B)
R026	1-216-049-91	METAL GLAZE	47K 5% 1/10W	R098	1-216-625-11	METAL CHIP	27K 0.5% 1/10W (B)
R027	1-216-295-00	METAL CHIP	0 5% 1/10W	R099	1-216-295-00	METAL CHIP	0 5% 1/10W (B)
R028	1-216-295-00	METAL CHIP	0 5% 1/10W	R100	1-216-073-00	METAL CHIP	10K 5% 1/10W (B)
R029	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R101	1-216-061-00	METAL CHIP	3.3K 5% 1/10W (B)
R030	1-216-025-00	METAL CHIP	100 5% 1/10W	R102	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
				R103	1-216-057-00	METAL CHIP	2.2K 5% 1/10W (B)

TC-30

TK-26

TM-119

TU-145

Ref. No.	Part No.	Description	Remark
R104	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R105	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R106	1-216-043-00	METAL CHIP 500 5% 1/10W	
R107	1-216-043-00	METAL CHIP 500 5% 1/10W	
R109	1-216-037-00	METAL CHIP 330 5% 1/10W	
R111	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R112	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R113	1-216-037-00	METAL CHIP 330 5% 1/10W	
R114	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R115	1-216-085-00	METAL CHIP 4.7K 5% 1/10W	
R118	1-216-295-00	METAL CHIP 0 5% 1/10W	
R501	1-216-212-00	METAL GLAZE 3.9K 5% 1/8W	
< VARIABLE RESISTOR >			
RV001	1-238-019-11	RES. ADJ. CARBON 47K (B)	
RV002	1-241-630-11	RES. ADJ. CARBON 10K (B)	
RV003	1-241-630-11	RES. ADJ. CARBON 10K (B)	
< VIBRATOR >			
X001	1-577-117-11	VIBRATOR, CRYSTAL (4.43MHz) (B)	

* A-7063-937-A TK-26 (G) BOARD, COMPLETE			

(Ref. No 7,000 series)			
< BUZZER >			
BZ501	1-529-080-11	BUZZER, PIEZOELECTRIC	
< CAPACITOR >			
C501	1-163-938-00	CERAMIC CHIP 0.1uF 25V	
C502	1-124-589-11	ELECT 47uF 20% 16V	
C503	1-163-938-00	CERAMIC CHIP 0.1uF 25V	
C504	1-164-336-11	CERAMIC CHIP 0.33uF 25V	
C505	1-104-905-11	CAP. DOUBLE LAYERS 0.22F	
< CONNECTOR >			
* CN501	1-691-059-21	HOUSING, CONNECTOR 27P	
* CN502	1-691-059-21	HOUSING, CONNECTOR 27P	
CN503	1-691-084-21	HOUSING, CONNECTOR 25P	
CN504	1-691-084-21	HOUSING, CONNECTOR 25P	
* CN507	1-564-012-11	PIN, CONNECTOR 3P	
CN508	1-506-481-11	PIN, CONNECTOR 2P	
< DIODE >			
D503	8-719-106-16	DIODE 8M-B1	

Ref. No.	Part No.	Description	Remark
< IC >			
IC501	8-759-973-95	IC BA6219B	
< JUMPER RESISTOR >			
JR502	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR503	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR504	1-216-296-00	METAL CHIP 0 5% 1/8W	
< RESISTOR >			
R501	1-216-295-00	METAL CHIP 0 5% 1/10W	
R505	1-216-013-00	METAL CHIP 33 5% 1/10W	
R506	1-216-013-00	METAL CHIP 33 5% 1/10W	
R507	1-216-013-00	METAL CHIP 33 5% 1/10W	
R508	1-216-013-00	METAL CHIP 33 5% 1/10W	
R509	1-216-017-00	METAL CHIP 47 5% 1/10W	
R511	1-216-295-00	METAL CHIP 0 5% 1/10W	
R512	1-216-296-00	METAL CHIP 0 5% 1/10W	
R519	1-216-295-00	METAL CHIP 0 5% 1/10W	

* TM-119 BOARD (Supplied with M904)			

(Ref. No 7,000 series)			
< CONNECTOR >			
CN001	1-506-481-11	PIN, CONNECTOR 2P	

* A-7063-936-A TU-145 (G) BOARD, COMPLETE (VC, NP, AE)			
* A-7063-994-A TU-145 (F) BOARD, COMPLETE (B)			
* A-7063-998-A TU-145 (X) BOARD, COMPLETE (UB)			

(Ref. No 5,000 series)			
1-555-110-00 CABLE, PIN			
1-751-603-11 CABLE, FLAT (FMT-1)			
< CAPACITOR >			
C251	1-184-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C252	1-183-017-00	CERAMIC CHIP 0.0047uF 5% 50V	
C253	1-183-009-13	CERAMIC CHIP 0.001uF 10% 50V	
C254	1-183-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C255	1-124-257-00	ELECT 2.2uF 20% 50V	
C901	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C902	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C903	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C905	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C906	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C911	1-163-033-11	CERAMIC CHIP 0.01uF 50V	
C912	1-124-477-11	ELECT 47uF 20% 25V	

Ref. No.	Part No.	Description	Remark
C913	1-153-031-11	CERAMIC CHIP	0.01uF 50V (B)
C914	1-124-477-11	ELECT	47uF 20% 25V (B)
C915	1-153-031-11	CERAMIC CHIP	0.01uF 50V
C916	1-124-477-11	ELECT	47uF 20% 25V
C918	1-154-161-11	CERAMIC CHIP	0.0022uF 10% 100V
C919	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C920	1-124-927-11	ELECT	4.7uF 20% 100V
C924	1-124-034-51	ELECT	33uF 20% 16V (VC, NP, AE)
C925	1-124-034-51	ELECT	33uF 20% 16V (VC, NP, AE)
C926	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V (VC, NP, AE)
C927	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V (VC, NP, AE)
C929	1-130-483-00	MYLAR	0.01uF 5% 50V (VC, NP, AE)
C930	1-163-031-11	CERAMIC CHIP	0.01uF 50V (VC, NP, AE)
C931	1-124-477-11	ELECT	47uF 20% 25V (VC, NP, AE)
C932	1-163-031-11	CERAMIC CHIP	0.01uF 50V (VC, NP, AE)
C934	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C935	1-124-477-11	ELECT	47uF 20% 25V
C936	1-124-034-51	ELECT	33uF 20% 16V
C937	1-124-034-51	ELECT	33uF 20% 16V
C938	1-124-034-51	ELECT	33uF 20% 16V
C942	1-126-301-11	ELECT	1uF 20% 50V
C943	1-124-034-51	ELECT	33uF 20% 16V
C945	1-126-301-11	ELECT	1uF 20% 50V
C947	1-124-477-11	ELECT	47uF 20% 25V
C948	1-124-907-11	ELECT	10uF 20% 50V
C950	1-124-927-11	ELECT	4.7uF 20% 100V
C999	1-163-038-00	CERAMIC CHIP	0.1uF 25V
< CONNECTOR >			
* CN901	1-691-059-21	HOUSING, CONNECTOR 27P	
< DIODE >			
D251	8-719-801-48	DIODE 1SS193	
D901	8-719-043-13	DIODE MA3330-H-TX	
D903	8-719-210-33	DIODE EC10DSZ	
D904	8-719-210-33	DIODE EC10DSZ	
< IC >			
IC901	8-755-512-05	IC TDA8415 (VC, NP, AE)	
IC902	8-755-182-88	IC PQ09725U	
IC903	8-755-182-86	IC PQ05725U	
< TUNER >			
△IF901	1-693-205-11	TUNER (BTF-3C402) (B)	
△TU901	1-693-205-11	TUNER (BTF-3C402) (B)	
△IF901	1-693-206-11	TUNER (BTF-3U801) (UB)	
△TU901	1-693-206-11	TUNER (BTF-3U801) (UB)	
△IF901	1-693-207-11	TUNER (BTF-3C901) (VC, NP, AE)	
△TU901	1-693-207-11	TUNER (BTF-3C901) (VC, NP, AE)	

Ref. No.	Part No.	Description	Remark
< COIL >			
L901	1-408-970-21	INDUCTOR 10uH	
L902	1-408-982-11	INDUCTOR 100uH	
L903	1-408-970-21	INDUCTOR 10uH	(B)
L906	1-408-982-11	INDUCTOR 100uH	
L907	1-408-970-21	INDUCTOR 10uH	(VC, NP, AE)
< TRANSISTOR >			
Q251	8-729-421-22	TRANSISTOR UN211	
Q253	8-729-010-05	TRANSISTOR NSB709-RT1	
Q254	8-729-010-25	TRANSISTOR NSD601-RT1	
Q901	8-729-422-29	TRANSISTOR 2SD601A-S	
Q902	8-729-010-25	TRANSISTOR NSD601-RT1	
Q903	8-729-010-25	TRANSISTOR NSD601-RT1	
Q904	8-729-010-25	TRANSISTOR NSD601-RT1	
< RESISTOR >			
R253	1-218-295-00	METAL CHIP 0 5% 1/10W	
R254	1-218-053-00	METAL CHIP 1.5K 5% 1/10W	
R255	1-218-121-00	METAL CHIP 1M 5% 1/10W	
R256	1-218-055-00	METAL CHIP 4.7K 5% 1/10W	
R257	1-218-059-00	METAL CHIP 2.7K 5% 1/10W	
R258	1-218-063-00	METAL CHIP 3.9K 5% 1/10W	
R259	1-218-053-00	METAL CHIP 1.5K 5% 1/10W	
R260	1-218-057-00	METAL CHIP 2.2K 5% 1/10W	
R901	1-218-295-00	METAL CHIP 0 5% 1/10W	
R902	1-410-997-31	INDUCTOR CHIP 2.2uH	
R903	1-218-295-00	METAL CHIP 0 5% 1/10W (B)	
R904	1-218-295-00	METAL CHIP 0 5% 1/10W (B)	
R905	1-218-295-00	METAL CHIP 0 5% 1/10W	
R907	1-218-025-00	METAL CHIP 100 5% 1/10W	
R908	1-218-025-00	METAL CHIP 100 5% 1/10W	
R909	1-218-025-00	METAL CHIP 100 5% 1/10W	
R910	1-218-057-00	METAL CHIP 2.2K 5% 1/10W	
R911	1-218-075-00	METAL CHIP 12K 5% 1/10W	
R912	1-218-071-00	METAL CHIP 8.2K 5% 1/10W	
R913	1-218-049-00	METAL CHIP 1K 5% 1/10W	
R916	1-218-025-00	METAL CHIP 100 5% 1/10W	
R918	1-218-039-00	METAL CHIP 390 5% 1/10W	
R919	1-218-041-00	METAL CHIP 470 5% 1/10W	
R921	1-218-295-00	METAL CHIP 0 5% 1/10W	
R922	1-218-049-00	METAL CHIP 1K 5% 1/10W (VC, NP, AE)	
R923	1-218-049-00	METAL CHIP 1K 5% 1/10W (VC, NP, AE)	
R924	1-218-055-00	METAL CHIP 1.8K 5% 1/10W (VC, NP, AE)	
R925	1-218-295-00	METAL CHIP 0 5% 1/10W	
R926	1-218-045-00	METAL CHIP 680 5% 1/10W	
R927	1-218-049-00	METAL CHIP 1K 5% 1/10W	
R928	1-218-295-00	METAL CHIP 0 5% 1/10W (UB, B)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
R929	1-216-295-00	METAL CHIP	0 5% 1/10W (UB, B)
R930	1-216-057-08	METAL CHIP	2.2K 5% 1/10W (VC, NP, AE)
R931	1-216-057-00	METAL CHIP	2.2K 5% 1/10W (VC, NP, AE)
R937	1-216-295-00	METAL CHIP	0 5% 1/10W
R940	1-216-295-00	METAL CHIP	0 5% 1/10W
R941	1-216-295-00	METAL CHIP	0 5% 1/10W
R943	1-216-041-00	METAL CHIP	470 5% 1/10W
R944	1-216-041-00	METAL CHIP	470 5% 1/10W
R945	1-216-295-00	METAL CHIP	0 5% 1/10W
R946	1-216-295-00	METAL CHIP	0 5% 1/10W
R947	1-216-295-00	METAL CHIP	0 5% 1/10W
R948	1-216-295-00	METAL CHIP	0 5% 1/10W (VC, NP, AE)
R950	1-216-222-00	METAL GLAZE	10K 5% 1/8W
R951	1-216-295-00	METAL CHIP	0 5% 1/10W
R955	1-216-295-00	METAL CHIP	0 5% 1/10W
R956	1-216-222-00	METAL GLAZE	10K 5% 1/8W
< VARIABLE RESISTOR >			
RV901	1-241-763-11	RES. ADJ. CARBON 4.7K	(VC, NP, AE)
< VIBRATOR >			
XS01	1-567-923-11	VIBRATOR, CRYSTAL (10MHz)	(VC, NP, AE)

* A-7063-928-A VI-121 (G) BOARD, COMPLETE (VC, NP, B)			
* A-7068-000-A VI-121 (I) BOARD, COMPLETE (AE, UB)			

(Ref. No. 2,000 series)			
1-761-600-11 CABLE, FLAT (FVF-1)			
1-761-606-13 CABLE, FLAT (FVF-2) (VC, NP, B)			
3-831-441-XX CUSHION (S)			
< CAPACITOR >			
C056	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C100	1-126-154-11	ELECT	47uF 20% 6.3V
C101	1-124-443-00	ELECT	100uF 20% 16V
C102	1-163-036-00	CERAMIC CHIP	0.1uF 25V
C103	1-163-233-11	CERAMIC CHIP	120PF 5% 50V
C104	1-163-131-00	CERAMIC CHIP	390PF 5% 50V
C106	1-163-257-11	CERAMIC CHIP	180PF 5% 50V
C107	1-163-249-11	CERAMIC CHIP	82PF 5% 50V
C108	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C109	1-126-154-11	ELECT	47uF 20% 6.3V
C110	1-126-176-11	ELECT	220uF 20% 16V
C111	1-126-154-11	ELECT	47uF 20% 6.3V
C112	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C113	1-126-154-11	ELECT	47uF 20% 6.3V
C114	1-124-938-11	ELECT	22uF 20% 16V

Ref. No.	Part No.	Description	Remark
C115	1-163-101-00	CERAMIC CHIP	22PF 5% 50V
C116	1-163-121-00	CERAMIC CHIP	150PF 5% 50V
C117	1-163-101-00	CERAMIC CHIP	22PF 5% 50V
C118	1-126-154-11	ELECT	47uF 20% 6.3V
C119	1-164-505-11	CERAMIC CHIP	2.2uF 16V
C122	1-163-113-00	CERAMIC CHIP	68PF 5% 50V
C123	1-163-099-00	CERAMIC CHIP	18PF 5% 50V
C124	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C125	1-126-154-11	ELECT	47uF 20% 6.3V
C126	1-163-243-11	CERAMIC CHIP	47PF 5% 50V
C127	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C128	1-126-154-11	ELECT	47uF 20% 6.3V
C129	1-126-154-11	ELECT	47uF 20% 6.3V
C130	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C131	1-163-243-11	CERAMIC CHIP	47PF 5% 50V
C132	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C133	1-126-157-11	ELECT	10uF 20% 16V
C134	1-163-127-00	CERAMIC CHIP	270PF 5% 50V
C135	1-163-243-11	CERAMIC CHIP	47PF 5% 50V
C136	1-126-154-11	ELECT	47uF 20% 6.3V
C137	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C138	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C139	1-126-154-11	ELECT	47uF 20% 6.3V
C140	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C141	1-126-154-11	ELECT	47uF 20% 6.3V
C142	1-126-154-11	ELECT	47uF 20% 6.3V
C143	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C144	1-126-154-11	ELECT	47uF 20% 6.3V
C145	1-126-154-11	ELECT	47uF 20% 6.3V
C147	1-163-257-11	CERAMIC CHIP	180PF 5% 50V
C148	1-126-154-11	ELECT	47uF 20% 6.3V
C150	1-126-154-11	ELECT	47uF 20% 6.3V
C151	1-126-157-11	ELECT	10uF 20% 16V
C153	1-163-239-11	CERAMIC CHIP	33PF 5% 50V
C154	1-163-245-11	CERAMIC CHIP	55PF 5% 50V
C155	1-124-638-11	ELECT	22uF 20% 10V
C156	1-126-157-11	ELECT	10uF 20% 16V
C157	1-126-154-11	ELECT	47uF 20% 6.3V
C158	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C159	1-163-121-00	CERAMIC CHIP	150PF 5% 50V
C160	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C161	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 50V
C162	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C163	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C164	1-126-154-11	ELECT	47uF 20% 6.3V
C165	1-163-099-00	CERAMIC CHIP	18PF 5% 50V
C166	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C167	1-126-157-11	ELECT	10uF 20% 16V
C168	1-163-229-11	CERAMIC CHIP	12PF 5% 50V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C169	1-163-249-11	CERAMIC CHIP	82PF 5% 50V	C224	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C170	1-126-154-11	ELECT	47uF 20% 6.3V	C225	1-163-241-11	CERAMIC CHIP	39PF 5% 50V
C171	1-126-154-11	ELECT	47uF 20% 6.3V	C226	1-163-113-00	CERAMIC CHIP	58PF 5% 50V
C173	1-126-154-11	ELECT	47uF 20% 6.3V	C228	1-126-154-11	ELECT	47uF 20% 6.3V
C174	1-126-157-11	ELECT	10uF 20% 16V	C229	1-127-561-11	ELECT (SOLID)	33uF 20% 10V
C175	1-124-902-00	ELECT	0.47uF 20% 50V	C230	1-126-157-11	ELECT	10uF 20% 16V
C176	1-126-157-11	ELECT	10uF 20% 16V	C235	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C177	1-163-031-11	CERAMIC CHIP	0.01uF 50V	C402	1-127-515-11	ELECT (SOLID)	47uF 20% 6.3V
C178	1-126-154-11	ELECT	47uF 20% 6.3V	C403	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C179	1-126-157-11	ELECT	10uF 20% 16V	C404	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C180	1-126-162-11	ELECT	3.3uF 20% 50V	C405	1-126-154-11	ELECT	47uF 20% 6.3V
C181	1-126-301-11	ELECT	1uF 20% 50V	C406	1-126-154-11	ELECT	47uF 20% 6.3V
C182	1-126-154-11	ELECT	47uF 20% 6.3V	C407	1-126-154-11	ELECT	47uF 20% 6.3V
C183	1-126-154-11	ELECT	47uF 20% 6.3V	C408	1-126-154-11	ELECT	47uF 20% 6.3V
C184	1-124-472-11	ELECT	470uF 20% 10V	C413	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C185	1-124-484-11	ELECT	0.22uF 20% 50V	C416	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C186	1-126-154-11	ELECT	47uF 20% 6.3V	C417	1-126-157-11	ELECT	10uF 20% 16V
C187	1-163-031-11	CERAMIC CHIP	0.01uF 50V	C501	1-126-154-11	ELECT	47uF 20% 6.3V
C188	1-163-031-11	CERAMIC CHIP	0.01uF 50V	C502	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C189	1-126-154-11	ELECT	47uF 20% 6.3V	C503	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C190	1-163-031-11	CERAMIC CHIP	0.01uF 50V	C504	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C191	1-163-031-11	CERAMIC CHIP	0.01uF 50V	C506	1-163-127-00	CERAMIC CHIP	270PF 5% 50V
C192	1-163-019-00	CERAMIC CHIP	0.0068uF 10% 50V	C507	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C193	1-124-903-11	ELECT	1uF 20% 50V	C508	1-163-243-11	CERAMIC CHIP	47PF 5% 50V
C194	1-124-254-00	ELECT	0.68uF 20% 50V	C509	1-163-241-11	CERAMIC CHIP	39PF 5% 50V
C195	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V	C510	1-163-240-11	CERAMIC CHIP	82PF 5% 50V
C196	1-124-903-11	ELECT	1uF 20% 50V	C511	1-163-104-00	CERAMIC CHIP	30PF 5% 50V
C200	1-126-154-11	ELECT	47uF 20% 6.3V	C517	1-163-988-11	CERAMIC CHIP	0.033uF 10% 25V
C201	1-163-031-11	CERAMIC CHIP	0.01uF 50V	C514	1-164-182-11	CERAMIC CHIP	0.0033uF 10% 50V
C202	1-163-031-11	CERAMIC CHIP	0.01uF 50V	C515	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C203	1-163-931-11	CERAMIC CHIP	0.01uF 50V	C516	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C204	1-163-931-11	CERAMIC CHIP	0.01uF 50V	C517	1-126-154-11	ELECT	47uF 20% 6.3V
C205	1-216-295-00	METAL CHIP	0 5% 1/10W	C518	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C206	1-163-997-00	CERAMIC CHIP	15PF 5% 50V	C519	1-163-257-11	CERAMIC CHIP	180PF 5% 50V
C207	1-126-157-11	ELECT	10uF 20% 16V	C520	1-163-137-00	CERAMIC CHIP	680PF 5% 50V
C208	1-163-031-11	CERAMIC CHIP	0.01uF 50V	C521	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C209	1-126-157-11	ELECT	10uF 20% 16V	C523	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C210	1-163-031-11	CERAMIC CHIP	0.01uF 50V	C524	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C212	1-126-154-11	ELECT	47uF 20% 6.3V	C525	1-163-113-00	CERAMIC CHIP	58PF 5% 50V
C214	1-124-638-11	ELECT	22uF 20% 10V	C526	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C215	1-163-036-00	CERAMIC CHIP	0.047uF 50V	C527	1-163-113-00	CERAMIC CHIP	58PF 5% 50V
C216	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C528	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C217	1-163-125-00	CERAMIC CHIP	220PF 5% 50V	C529	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C218	1-164-605-11	CERAMIC CHIP	0.47uF 25V	C532	1-126-154-11	ELECT	47uF 20% 6.3V
C219	1-163-121-00	CERAMIC CHIP	150PF 5% 50V	C533	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C220	1-163-121-00	CERAMIC CHIP	150PF 5% 50V	C534	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C221	1-163-263-11	CERAMIC CHIP	330PF 5% 50V	C535	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C222	1-163-131-00	CERAMIC CHIP	390PF 5% 50V	C536	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C223	1-163-031-11	CERAMIC CHIP	0.01uF 50V	C537	1-163-031-11	CERAMIC CHIP	0.01uF 50V

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Ref. No.	Part No.	Description	Remark
C538	1-163-087-00	CERAMIC CHIP	4PF 50V
C539	1-163-085-00	CERAMIC CHIP	22PF 50V
C540	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V
C541	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C542	1-163-113-00	CERAMIC CHIP	68PF 5% 50V
C543	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C544	1-163-085-00	CERAMIC CHIP	22PF 50V
C545	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V
C546	1-163-087-00	CERAMIC CHIP	4PF 50V
C547	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C551	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C552	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C553	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C554	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C555	1-126-154-11	ELECT	47uF 20% 6.3V
C556	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C557	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C558	1-126-154-11	ELECT	47uF 20% 6.3V
C559	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C560	1-126-154-11	ELECT	47uF 20% 6.3V
C561	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C562	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C563	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C565	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C566	1-163-237-11	CERAMIC CHIP	27PF 5% 50V
C567	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C569	1-163-097-00	CERAMIC CHIP	15PF 5% 50V
C570	1-163-129-00	CERAMIC CHIP	330PF 5% 50V
C601	1-163-109-00	CERAMIC CHIP	47PF 5% 50V
C602	1-163-109-00	CERAMIC CHIP	47PF 5% 50V
C603	1-163-109-00	CERAMIC CHIP	47PF 5% 50V
C604	1-163-109-00	CERAMIC CHIP	47PF 5% 50V
C605	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C606	1-126-157-11	ELECT	10uF 20% 16V
C607	1-163-109-00	CERAMIC CHIP	47PF 5% 50V
C608	1-126-154-11	ELECT	47uF 20% 6.3V
C609	1-126-154-11	ELECT	47uF 20% 6.3V
C610	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C611	1-164-346-11	CERAMIC CHIP	1uF 16V
C612	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C613	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C614	1-126-162-11	ELECT	3.3uF 20% 50V
C615	1-126-162-11	ELECT	3.3uF 20% 50V
C616	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C617	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C618	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C619	1-126-162-11	ELECT	3.3uF 20% 50V
C620	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C621	1-163-031-11	CERAMIC CHIP	0.01uF 50V

Ref. No.	Part No.	Description	Remark
C622	1-126-163-11	ELECT	4.7uF 20% 50V
C623	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C624	1-126-154-11	ELECT	47uF 20% 6.3V
C625	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C626	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C627	1-126-154-11	ELECT	47uF 20% 6.3V
C628	1-126-154-11	ELECT	47uF 20% 6.3V
C629	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C630	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C631	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C632	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C633	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C635	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C638	1-126-154-11	ELECT	47uF 20% 6.3V
C643	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C646	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C648	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C649	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C650	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C651	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C654	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C655	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C656	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C658	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
C659	1-126-163-11	ELECT	4.7uF 20% 50V
C660	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C661	1-126-154-11	ELECT	47uF 20% 6.3V
C662	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C663	1-126-154-11	ELECT	47uF 20% 6.3V
C665	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C666	1-126-154-11	ELECT	47uF 20% 6.3V
C702	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C708	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C709	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C710	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C711	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C712	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C713	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C714	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C715	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C716	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C717	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C719	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C720	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C721	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C722	1-163-113-00	CERAMIC CHIP	68PF 5% 50V
C723	1-163-121-00	CERAMIC CHIP	150PF 5% 50V
C724	1-163-241-11	CERAMIC CHIP	39PF 5% 50V
C725	1-163-121-00	CERAMIC CHIP	150PF 5% 50V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C726	1-163-031-11	CERAMIC CHIP	0.01uF	50V	CN602	1-573-048-11	CONNECTOR, BOARD TO BOARD 15P
C727	1-163-031-11	CERAMIC CHIP	0.01uF	50V		< DIODE >	
C728	1-126-154-11	ELECT	47uF	20% 6.3V	D101	8-719-104-34	DIODE 1S2836
C729	1-163-038-00	CERAMIC CHIP	0.1uF	25V	D102	8-719-801-78	DIODE 1SS184
C731	1-163-097-00	CERAMIC CHIP	15PF	5% 50V	D104	8-719-801-78	DIODE 1SS184
C732	1-163-031-11	CERAMIC CHIP	0.01uF	50V	D502	8-719-801-78	DIODE 1SS184
C733	1-163-031-11	CERAMIC CHIP	0.01uF	50V	D503	8-719-106-44	DIODE RD9.1M-62
C734	1-163-031-11	CERAMIC CHIP	0.01uF	50V	D601	8-719-801-78	DIODE 1SS184
C735	1-163-257-11	CERAMIC CHIP	180PF	5% 50V	D801	8-719-801-78	DIODE 1SS184
C736	1-163-243-11	CERAMIC CHIP	47PF	5% 50V	D900	8-719-041-79	DIODE MA721MA-TX
C737	1-163-245-11	CERAMIC CHIP	56PF	5% 50V	D950	8-719-801-78	DIODE 1SS184
C738	1-163-031-11	CERAMIC CHIP	0.01uF	50V		< FERRITE BEAD >	
C801	1-163-031-11	CERAMIC CHIP	0.01uF	50V	FB001	1-412-364-11	INDUCTOR 0.01uH
C802	1-163-035-00	CERAMIC CHIP	0.047uF	50V	FB002	1-412-364-11	INDUCTOR 0.01uH
C803	1-126-154-11	ELECT	47uF	20% 6.3V	FB003	1-412-364-11	INDUCTOR 0.01uH
C804	1-163-253-11	CERAMIC CHIP	120PF	5% 50V		< FILTER >	
C805	1-163-031-11	CERAMIC CHIP	0.01uF	50V	FL101	1-239-168-11	FILTER, LOW PASS (DE MOD)
C807	1-163-097-00	CERAMIC CHIP	15PF	5% 50V	FL102	1-239-169-21	FILTER, LOW PASS (Y)
C808	1-163-275-11	CERAMIC CHIP	0.001uF	5% 50V	FL103	1-236-774-11	FILTER, LOW PASS (Y)
C809	1-126-162-11	ELECT	4.7uF	20% 50V	FL501	1-409-466-11	TRAP
C810	1-216-295-00	METAL CHIP	0	5% 1/10W	FL502	1-239-171-21	FILTER, CHROMA BAND PASS
C811	1-163-145-00	CERAMIC CHIP	0.0015uF	5% 50V	FL503	1-415-858-11	DELAY LINE
C812	1-163-031-11	CERAMIC CHIP	0.01uF	50V	FL504	1-415-858-11	DELAY LINE
C813	1-124-903-11	ELECT	1uF	20% 50V	FL601	1-239-236-11	ENCAPSULATED COMPONENT
C814	1-163-131-00	CERAMIC CHIP	390PF	5% 50V	FL602	1-239-236-11	ENCAPSULATED COMPONENT
C815	1-124-903-11	ELECT	1uF	20% 50V	FL603	1-239-236-11	ENCAPSULATED COMPONENT
C816	1-163-031-11	CERAMIC CHIP	0.01uF	50V	FL604	1-239-925-11	FILTER, LOW PASS
C817	1-163-031-11	CERAMIC CHIP	0.01uF	50V	FL605	1-239-153-11	FILTER, BAND PASS
C900	1-126-154-11	ELECT	47uF	20% 6.3V		< IC >	
C901	1-126-154-11	ELECT	47uF	20% 6.3V	IC103	8-759-711-47	IC NJM2209M
C902	1-126-176-11	ELECT	220uF	20% 10V	IC104	8-759-084-76	IC MM1111XFP
C950	1-126-154-11	ELECT	47uF	20% 6.3V	IC105	8-752-065-88	IC CXA1810Q
C906	1-163-243-11	CERAMIC CHIP	47PF	5% 50V	IC401	8-759-009-10	IC MC140690BF
C907	1-163-245-11	CERAMIC CHIP	56PF	5% 50V	IC402	8-759-009-19	IC MC14081BF
C909	1-163-245-11	CERAMIC CHIP	56PF	5% 50V	IC403	8-759-009-10	IC MC140690BF
		< FILTER >			IC405	8-759-504-46	IC PQ05BF1
CF001	1-231-280-00	FILTER CERAMIC (4.43MHz)			IC406	8-759-300-71	IC HD140538FP
		< CONNECTOR >			IC501	8-752-066-88	IC CXA1725M
CN101	1-569-338-11	CONNECTOR, BOARD TO BOARD 19P			IC502	8-759-012-00	IC MC10H116M
CN102	1-569-338-11	CONNECTOR, BOARD TO BOARD 19P			IC503	8-759-998-32	IC CXD-2107M
CN103	1-569-338-11	CONNECTOR, BOARD TO BOARD 19P			IC601	8-759-506-87	IC BUS801K
CN104	1-569-338-11	CONNECTOR, BOARD TO BOARD 19P			IC602	8-752-333-24	IC CXL1505M
CN105	1-691-053-21	HOUSING, CONNECTOR 21P			IC603	8-752-334-55	IC CXK1175AM
CN106	1-599-337-11	CONNECTOR, BOARD TO BOARD 11P			IC604	8-752-342-81	IC CXD2105AQ
* CN107	1-691-047-21	HOUSING, CONNECTOR 15P					
* CN108	1-691-047-21	HOUSING, CONNECTOR 15P	(VC, NF, B)				
CN601	1-573-842-11	CONNECTOR, BOARD TO BOARD 10P					

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Ref. No.	Part No.	Description	Remark
IC701	8-759-710-07	IC NJM2234M	
IC801	8-759-260-38	IC MS2350FP-7000	
IC802	8-759-084-75	IC MM111XFF	
< JUMPER RESISTOR >			
JR003	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR004	1-216-296-00	METAL CHIP 0 5% 1/8W (VC, NP, B)	
JR005	1-216-296-00	METAL CHIP 0 5% 1/8W (VC, NP, B)	
JR006	1-216-296-00	METAL CHIP 0 5% 1/8W (VC, NP, B)	
JR007	1-216-296-00	METAL CHIP 0 5% 1/8W (VC, NP, B)	
JR008	1-216-296-00	METAL CHIP 0 5% 1/8W (VC, NP, B)	
< COIL >			
L101	1-408-982-11	INDUCTOR 100uH	
L102	1-408-987-21	INDUCTOR 5.6uH	
L103	1-408-970-21	INDUCTOR 10uH	
L104	1-410-360-11	INDUCTOR CHIP 56uH	
L105	1-410-360-11	INDUCTOR CHIP 56uH	
L106	1-410-386-31	INDUCTOR CHIP 39uH	
L107	1-410-386-11	INDUCTOR CHIP 27uH	
L108	1-410-391-11	INDUCTOR CHIP 68uH	
L109	1-408-982-11	INDUCTOR 100uH	
L110	1-410-381-11	INDUCTOR CHIP 10uH	
L111	1-408-982-11	INDUCTOR 100uH	
L112	1-408-982-11	INDUCTOR 100uH	
L113	1-410-393-11	INDUCTOR CHIP 100uH	
L114	1-408-982-11	INDUCTOR 100uH	
L115	1-408-970-21	INDUCTOR 10uH	
L117	1-410-386-31	INDUCTOR CHIP 39uH	
L118	1-410-390-11	INDUCTOR CHIP 56uH	
L119	1-408-948-00	INDUCTOR 220uH	
L120	1-408-981-21	INDUCTOR 82uH	
L121	1-408-970-21	INDUCTOR 56uH	
L122	1-410-388-31	INDUCTOR CHIP 39uH	
L124	1-408-982-11	INDUCTOR 100uH	
L125	1-408-982-11	INDUCTOR 100uH	
L127	1-410-386-11	INDUCTOR CHIP 27uH	
L128	1-410-393-31	INDUCTOR CHIP 15uH	
L401	1-408-982-11	INDUCTOR 100uH	
L501	1-408-982-11	INDUCTOR 100uH	
L503	1-408-985-21	INDUCTOR 180uH	
L504	1-408-968-21	INDUCTOR 6.8uH	
L505	1-408-963-11	INDUCTOR 2.7uH	
L506	1-408-973-21	INDUCTOR 18uH	
L507	1-408-973-21	INDUCTOR 18uH	
L508	1-408-982-11	INDUCTOR 100uH	
L509	1-408-982-11	INDUCTOR 100uH	
L510	1-408-985-21	INDUCTOR 270uH	

Ref. No.	Part No.	Description	Remark
L511	1-408-984-21	INDUCTOR 150uH	
L512	1-408-984-21	INDUCTOR 150uH	
L513	1-408-982-11	INDUCTOR 100uH	
L515	1-408-972-21	INDUCTOR 15uH	
L516	1-408-970-21	INDUCTOR 10uH	
L518	1-408-982-11	INDUCTOR 100uH	
L519	1-408-982-11	INDUCTOR 100uH	
L520	1-408-967-21	INDUCTOR 5.6uH	
L521	1-408-972-21	INDUCTOR 15uH	
L522	1-408-970-21	INDUCTOR 10uH	
L523	1-408-985-21	INDUCTOR 180uH	
L601	1-408-982-11	INDUCTOR 100uH	
L602	1-408-978-21	INDUCTOR 47uH	
L705	1-408-984-21	INDUCTOR 150uH	
L706	1-408-948-00	INDUCTOR 220uH	
L707	1-408-987-21	INDUCTOR 330uH	
L708	1-408-982-11	INDUCTOR 100uH	
L710	1-408-987-21	INDUCTOR 330uH	
L711	1-408-983-21	INDUCTOR 120uH	
< TRANSISTOR >			
Q004	8-728-901-01	TRANSISTOR 6TC144EK	
Q005	8-728-901-01	TRANSISTOR 6TC144EK	
Q100	8-728-010-25	TRANSISTOR MSD601-RT1	
Q101	8-728-010-25	TRANSISTOR MSD601-RT1	
Q102	8-728-010-05	TRANSISTOR MSB709-RT1	
Q103	8-728-010-25	TRANSISTOR MSD601-RT1	
Q104	8-728-010-25	TRANSISTOR MSD601-RT1	
Q105	8-728-102-07	TRANSISTOR ZSC2223-F13	
Q106	8-728-010-25	TRANSISTOR MSD601-RT1	
Q107	8-728-010-25	TRANSISTOR MSD601-RT1	
Q109	8-728-010-25	TRANSISTOR MSD601-RT1	
Q110	8-728-010-25	TRANSISTOR MSD601-RT1	
Q111	8-728-901-06	TRANSISTOR 6TA144EK	
Q112	8-728-010-25	TRANSISTOR MSD601-RT1	
Q113	8-728-010-25	TRANSISTOR MSD601-RT1	
Q114	8-728-010-25	TRANSISTOR MSD601-RT1	
Q115	8-728-010-25	TRANSISTOR MSD601-RT1	
Q116	8-728-901-01	TRANSISTOR 6TC144EK	
Q118	8-728-010-25	TRANSISTOR MSD601-RT1	
Q119	8-728-010-05	TRANSISTOR MSB709-RT1	
Q120	8-728-010-25	TRANSISTOR MSD601-RT1	
Q121	8-728-010-25	TRANSISTOR MSD601-RT1	
Q122	8-728-901-01	TRANSISTOR 6TC144EK	
Q123	8-728-010-25	TRANSISTOR MSD601-RT1	
Q124	8-728-102-07	TRANSISTOR ZSC2223-F13	
Q125	8-728-102-07	TRANSISTOR ZSC2223-F13	
Q127	8-728-010-25	TRANSISTOR MSD601-RT1	
Q128	8-728-010-25	TRANSISTOR MSD601-RT1	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q129	8-729-010-25	TRANSISTOR	MSD601-RT1	Q507	8-729-901-01	TRANSISTOR	DT144EK
Q130	8-729-901-06	TRANSISTOR	DTA144EK	Q508	8-729-801-06	TRANSISTOR	DTA144EK
Q131	8-729-010-25	TRANSISTOR	MSD601-RT1	Q509	8-729-010-25	TRANSISTOR	MSD601-RT1
Q132	8-729-010-25	TRANSISTOR	MSD601-RT1	Q510	8-729-901-01	TRANSISTOR	DT144EK
Q133	8-729-102-07	TRANSISTOR	ZSC2223-F13	Q511	8-729-901-06	TRANSISTOR	DTA144EK
Q135	8-729-102-07	TRANSISTOR	ZSC2223-F13	Q512	8-729-901-01	TRANSISTOR	DT144EK
Q136	8-729-102-07	TRANSISTOR	ZSC2223-F13	Q513	8-729-010-25	TRANSISTOR	MSD601-RT1
Q137	8-729-901-06	TRANSISTOR	DTA144EK	Q514	8-729-010-25	TRANSISTOR	MSD601-RT1
Q138	8-729-010-05	TRANSISTOR	MSB709-RT1	Q515	8-729-010-25	TRANSISTOR	MSD601-RT1
Q139	8-729-010-05	TRANSISTOR	MSB709-RT1	Q516	8-729-010-25	TRANSISTOR	MSD601-RT1
Q140	8-729-010-25	TRANSISTOR	MSD601-RT1	Q517	8-729-010-25	TRANSISTOR	MSD601-RT1
Q141	8-729-901-01	TRANSISTOR	DT144EK	Q519	8-729-901-01	TRANSISTOR	DT144EK
Q142	8-729-010-05	TRANSISTOR	MSB709-RT1	Q520	8-729-901-01	TRANSISTOR	DT144EK
Q144	8-729-901-01	TRANSISTOR	DT144EK	Q522	8-729-901-01	TRANSISTOR	DT144EK
Q145	8-729-901-01	TRANSISTOR	DT144EK	Q523	8-729-901-01	TRANSISTOR	DT144EK
Q146	8-729-010-25	TRANSISTOR	MSD601-RT1	Q524	8-729-010-25	TRANSISTOR	MSD601-RT1
Q147	8-729-010-25	TRANSISTOR	MSD601-RT1	Q525	8-729-901-06	TRANSISTOR	DTA144EK
Q149	8-729-010-05	TRANSISTOR	MSB709-RT1	Q528	8-729-801-46	TRANSISTOR	ZSC3084-F
Q150	8-729-010-05	TRANSISTOR	MSB709-RT1	Q529	8-729-230-49	TRANSISTOR	ZSC2712-YG
Q151	8-729-010-05	TRANSISTOR	MSB709-RT1	Q530	8-729-216-21	TRANSISTOR	ZSA1182-Y
Q152	8-729-010-05	TRANSISTOR	MSB709-RT1	Q531	8-729-806-94	TRANSISTOR	ZSA1237F-BS
Q153	8-729-010-25	TRANSISTOR	MSD601-RT1	Q532	8-729-010-05	TRANSISTOR	MSB709-RT1
Q154	8-729-010-25	TRANSISTOR	MSD601-RT1	Q533	8-729-901-01	TRANSISTOR	DT144EK
Q155	8-729-901-01	TRANSISTOR	DT144EK	Q534	8-729-010-05	TRANSISTOR	MSB709-RT1
Q156	8-729-901-01	TRANSISTOR	DT144EK	Q535	8-729-010-25	TRANSISTOR	MSD601-RT1
Q157	8-729-901-01	TRANSISTOR	DT144EK	Q536	8-729-901-01	TRANSISTOR	DT144EK
Q158	8-729-901-09	TRANSISTOR	DTA144EK	Q537	8-729-901-01	TRANSISTOR	DT144EK
Q159	8-729-202-38	TRANSISTOR	ZSC3326N-A	Q538	8-729-010-25	TRANSISTOR	MSD601-RT1
Q160	8-729-202-38	TRANSISTOR	ZSC3326N-A	Q539	8-729-010-25	TRANSISTOR	MSD601-RT1
Q161	8-729-010-25	TRANSISTOR	MSD601-RT1	Q540	8-729-010-05	TRANSISTOR	MSB709-RT1
Q162	8-729-010-25	TRANSISTOR	MSD601-RT1	Q610	8-729-010-25	TRANSISTOR	MSD601-RT1
Q164	8-729-010-25	TRANSISTOR	MSD601-RT1	Q611	8-729-010-25	TRANSISTOR	MSD601-RT1
Q165	8-729-010-25	TRANSISTOR	MSD601-RT1	Q612	8-729-010-05	TRANSISTOR	MSB709-RT1
Q166	8-729-010-25	TRANSISTOR	MSD601-RT1	Q613	8-729-010-25	TRANSISTOR	MSD601-RT1
Q177	8-729-901-01	TRANSISTOR	DT144EK	Q614	8-729-120-28	TRANSISTOR	ZSC1523-LS16
Q401	8-729-901-06	TRANSISTOR	DTA144EK	Q615	8-729-010-05	TRANSISTOR	MSB709-RT1
Q402	8-729-901-01	TRANSISTOR	DT144EK	Q616	8-729-010-05	TRANSISTOR	MSB709-RT1
Q403	8-729-901-06	TRANSISTOR	DTA144EK	Q617	8-729-010-25	TRANSISTOR	MSD601-RT1
Q404	8-729-901-01	TRANSISTOR	DT144EK	Q618	8-729-010-05	TRANSISTOR	MSB709-RT1
Q405	8-729-901-06	TRANSISTOR	DTA144EK	Q619	8-729-010-25	TRANSISTOR	MSD601-RT1
Q406	8-729-001-01	TRANSISTOR	DT144EK	Q620	8-729-010-05	TRANSISTOR	MSB709-RT1
Q407	8-729-010-25	TRANSISTOR	MSD601-RT1	Q621	8-729-010-05	TRANSISTOR	MSB709-RT1
Q408	8-729-010-25	TRANSISTOR	MSD601-RT1	Q623	8-729-010-25	TRANSISTOR	MSD601-RT1
Q501	8-729-102-07	TRANSISTOR	ZSC2223-F13	Q624	8-729-010-05	TRANSISTOR	MSB709-RT1
Q502	8-729-010-25	TRANSISTOR	MSD601-RT1	Q701	8-729-010-05	TRANSISTOR	MSB709-RT1
Q503	8-729-010-25	TRANSISTOR	MSD601-RT1	Q702	8-729-010-25	TRANSISTOR	MSD601-RT1
Q504	8-729-901-01	TRANSISTOR	DT144EK	Q703	8-729-010-05	TRANSISTOR	MSB709-RT1
Q505	8-729-901-01	TRANSISTOR	DT144EK	Q704	8-729-010-25	TRANSISTOR	MSD601-RT1
Q506	8-729-102-07	TRANSISTOR	ZSC2223-F13	Q705	8-729-901-06	TRANSISTOR	DTA144EK

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark	
Q706	8-729-102-07	TRANSISTOR	2SC2223-F13	R115	1-216-037-00	METAL CHIP	330 5% 1/10W	
Q707	8-729-010-25	TRANSISTOR	MSD601-RT1	R116	1-216-041-00	METAL CHIP	470 5% 1/10W	
Q708	8-729-901-01	TRANSISTOR	DTCL44EK	R118	1-216-073-00	METAL CHIP	10K 5% 1/10W	
Q709	8-729-901-06	TRANSISTOR	DTAL44EK	R119	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	
Q711	8-729-010-25	TRANSISTOR	MSD601-RT1	R120	1-216-085-00	METAL CHIP	33K 5% 1/10W	
Q712	8-729-901-01	TRANSISTOR	DTCL44EK	R121	1-216-081-00	METAL CHIP	22K 5% 1/10W	
Q713	8-729-010-05	TRANSISTOR	MSB709-RT1	R122	1-216-047-00	METAL CHIP	820 5% 1/10W	
Q714	8-729-010-25	TRANSISTOR	MSD601-RT1	R123	1-216-037-00	METAL CHIP	330 5% 1/10W	
Q715	8-729-901-01	TRANSISTOR	DTCL44EK	R124	1-216-043-00	METAL CHIP	560 5% 1/10W	
Q716	8-729-010-25	TRANSISTOR	MSD601-RT1	R125	1-216-073-00	METAL CHIP	10K 5% 1/10W	
Q717	8-729-010-25	TRANSISTOR	MSD601-RT1	R126	1-216-025-00	METAL CHIP	100 5% 1/10W	
Q718	8-729-010-25	TRANSISTOR	MSD601-RT1	R127	1-216-073-00	METAL CHIP	10K 5% 1/10W	
Q719	8-729-010-25	TRANSISTOR	MSD601-RT1	R128	1-216-073-00	METAL CHIP	10K 5% 1/10W	
Q720	8-729-010-25	TRANSISTOR	MSD601-RT1	R129	1-216-073-00	METAL CHIP	10K 5% 1/10W	
Q722	8-729-010-25	TRANSISTOR	MSD601-RT1	R130	1-216-073-00	METAL CHIP	10K 5% 1/10W	
Q801	8-729-901-06	TRANSISTOR	DTAL44EK	R131	1-216-047-00	METAL CHIP	820 5% 1/10W	
Q802	8-729-901-01	TRANSISTOR	DTCL44EK	R132	1-216-047-00	METAL CHIP	820 5% 1/10W	
Q804	8-729-420-12	TRANSISTOR	XN4213	R133	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	
Q805	8-729-420-20	TRANSISTOR	XN4312	R134	1-216-046-00	METAL CHIP	750 5% 1/10W	
Q806	8-729-901-01	TRANSISTOR	DTCL44EK	R135	1-216-041-00	METAL CHIP	470 5% 1/10W	
Q801	8-729-901-01	TRANSISTOR	DTCL44EK	(VC, NP, B)	R136	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
Q801	8-729-010-25	TRANSISTOR	MSD601-RT1	(AE, UB)	R137	1-216-028-00	METAL CHIP	150 5% 1/10W
Q802	8-729-010-25	TRANSISTOR	MSD601-RT1		R138	1-216-077-00	METAL CHIP	15K 5% 1/10W
Q803	8-729-901-01	TRANSISTOR	DTCL44EK		R139	1-216-049-00	METAL CHIP	1K 5% 1/10W
Q804	8-729-901-01	TRANSISTOR	DTCL44EK	(VC, NP, B)	R140	1-216-049-00	METAL CHIP	1K 5% 1/10W
Q804	8-729-010-25	TRANSISTOR	MSD601-RT1	(AE, UB)	R141	1-216-049-00	METAL CHIP	1K 5% 1/10W
Q805	8-729-901-01	TRANSISTOR	DTCL44EK		R142	1-216-049-00	METAL CHIP	1K 5% 1/10W
Q806	8-729-901-01	TRANSISTOR	DTCL44EK		R143	1-216-063-00	METAL CHIP	3.9K 5% 1/10W
Q851	8-729-901-06	TRANSISTOR	DTAL44EK		R144	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q852	8-729-901-01	TRANSISTOR	DTCL44EK		R145	1-216-049-00	METAL CHIP	1K 5% 1/10W
Q896	8-729-901-01	TRANSISTOR	DTCL44EK		R146	1-216-085-00	METAL CHIP	33K 5% 1/10W
Q898	8-729-901-01	TRANSISTOR	DTCL44EK		R147	1-216-091-00	METAL CHIP	56K 5% 1/10W
Q899	8-729-901-01	TRANSISTOR	DTCL44EK		R148	1-216-041-00	METAL CHIP	470 5% 1/10W
					R149	1-216-049-00	METAL CHIP	1K 5% 1/10W
					R150	1-216-049-00	METAL CHIP	1K 5% 1/10W
< RESISTOR >								
R072	1-216-073-00	METAL CHIP	10K 5% 1/10W	R151	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	
R102	1-216-085-00	METAL CHIP	33K 5% 1/10W	R152	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	
R103	1-216-049-00	METAL CHIP	1K 5% 1/10W	R153	1-216-049-00	METAL CHIP	1K 5% 1/10W	
R104	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	R154	1-216-049-00	METAL CHIP	1K 5% 1/10W	
R105	1-216-059-00	METAL CHIP	2.7K 5% 1/10W	R155	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	
R106	1-216-041-00	METAL CHIP	470 5% 1/10W	R156	1-216-027-00	METAL CHIP	120 5% 1/10W	
R107	1-216-039-00	METAL CHIP	390 5% 1/10W	R157	1-216-081-00	METAL CHIP	22K 5% 1/10W	
R108	1-216-031-00	METAL CHIP	180 5% 1/10W	R158	1-216-081-00	METAL CHIP	22K 5% 1/10W	
R109	1-216-039-00	METAL CHIP	390 5% 1/10W	R159	1-216-049-00	METAL CHIP	1K 5% 1/10W	
R110	1-216-039-00	METAL CHIP	390 5% 1/10W	R160	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	
R111	1-216-069-00	METAL CHIP	6.8K 5% 1/10W	R161	1-216-049-00	METAL CHIP	1K 5% 1/10W	
R112	1-216-041-00	METAL CHIP	470 5% 1/10W	R162	1-216-035-00	METAL CHIP	270 5% 1/10W	
R113	1-216-047-00	METAL CHIP	820 5% 1/10W	R163	1-216-039-00	METAL CHIP	390 5% 1/10W	
R114	1-216-041-00	METAL CHIP	470 5% 1/10W	R164	1-216-041-00	METAL CHIP	470 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R165	1-216-043-00	METAL CHIP	560 5% 1/10W
R167	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R168	1-216-295-00	METAL CHIP	0 5% 1/10W
R169	1-216-025-00	METAL CHIP	100 5% 1/10W
R170	1-216-073-00	METAL CHIP	10K 5% 1/10W
R171	1-216-073-00	METAL CHIP	10K 5% 1/10W
R172	1-216-041-00	METAL CHIP	470 5% 1/10W
R173	1-216-049-00	METAL CHIP	1K 5% 1/10W
R174	1-216-049-00	METAL CHIP	1K 5% 1/10W
R175	1-216-073-00	METAL CHIP	10K 5% 1/10W
R176	1-216-035-00	METAL CHIP	270 5% 1/10W
R177	1-216-041-00	METAL CHIP	470 5% 1/10W
R178	1-216-043-00	METAL CHIP	560 5% 1/10W
R179	1-216-049-00	METAL CHIP	1K 5% 1/10W
R180	1-216-045-00	METAL CHIP	680 5% 1/10W
R181	1-216-295-00	METAL CHIP	0 5% 1/10W
R182	1-216-073-00	METAL CHIP	10K 5% 1/10W
R183	1-216-073-00	METAL CHIP	10K 5% 1/10W
R184	1-216-073-00	METAL CHIP	10K 5% 1/10W
R186	1-216-059-00	METAL CHIP	2.7K 5% 1/10W
R187	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R188	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R189	1-216-029-00	METAL CHIP	150 5% 1/10W
R190	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R191	1-216-073-00	METAL CHIP	10K 5% 1/10W
R192	1-216-050-00	METAL CHIP	1.5K 5% 1/10W
R193	1-216-039-00	METAL CHIP	380 5% 1/10W
R195	1-216-041-00	METAL CHIP	470 5% 1/10W
R196	1-216-029-00	METAL CHIP	150 5% 1/10W
R197	1-216-031-00	METAL CHIP	180 5% 1/10W
R198	1-216-049-00	METAL CHIP	1K 5% 1/10W (AE, UB)
R199	1-216-049-00	METAL CHIP	1K 5% 1/10W (VC, NP, B)
R200	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R201	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R202	1-216-043-00	METAL CHIP	560 5% 1/10W
R203	1-216-073-00	METAL CHIP	10K 5% 1/10W
R204	1-216-073-00	METAL CHIP	10K 5% 1/10W
R205	1-216-049-00	METAL CHIP	1K 5% 1/10W
R207	1-216-035-00	METAL CHIP	270 5% 1/10W
R208	1-216-073-00	METAL CHIP	10K 5% 1/10W
R209	1-216-073-00	METAL CHIP	10K 5% 1/10W
R210	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R211	1-216-085-00	METAL CHIP	33K 5% 1/10W
R212	1-216-049-00	METAL CHIP	1K 5% 1/10W
R214	1-216-073-00	METAL CHIP	10K 5% 1/10W (VC)
R215	1-216-073-00	METAL CHIP	10K 5% 1/10W
R216	1-216-077-00	METAL CHIP	15K 5% 1/10W
R217	1-216-295-00	METAL CHIP	0 5% 1/10W
R218	1-216-073-00	METAL CHIP	10K 5% 1/10W

Ref. No.	Part No.	Description	Remark
R219	1-216-085-00	METAL CHIP	33K 5% 1/10W
R220	1-216-077-00	METAL CHIP	15K 5% 1/10W
R221	1-216-049-00	METAL CHIP	1K 5% 1/10W
R222	1-216-760-11	METAL CHIP	220K 0.50% 1/10W
R223	1-216-939-11	METAL CHIP	100K 0.5% 1/10W
R224	1-216-685-11	METAL CHIP	27K 0.5% 1/10W
R225	1-216-681-11	METAL CHIP	18K 0.5% 1/10W
R226	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R227	1-216-049-00	METAL CHIP	1K 5% 1/10W
R228	1-216-073-00	METAL CHIP	10K 5% 1/10W
R229	1-216-077-00	METAL CHIP	15K 5% 1/10W
R230	1-216-047-00	METAL CHIP	820 5% 1/10W
R231	1-216-041-00	METAL CHIP	470 5% 1/10W
R233	1-216-050-00	METAL GLAZE	1.1K 5% 1/10W
R234	1-216-047-00	METAL CHIP	820 5% 1/10W
R235	1-216-049-00	METAL CHIP	1K 5% 1/10W
R237	1-216-295-00	METAL CHIP	0 5% 1/10W
R238	1-216-059-00	METAL CHIP	2.7K 5% 1/10W
R239	1-216-049-00	METAL CHIP	1K 5% 1/10W
R241	1-216-075-00	METAL CHIP	12K 5% 1/10W
R242	1-216-295-00	METAL CHIP	0 5% 1/10W
R243	1-216-075-00	METAL CHIP	12K 5% 1/10W
R244	1-216-049-00	METAL CHIP	1K 5% 1/10W
R245	1-216-079-00	METAL CHIP	18K 5% 1/10W
R246	1-216-085-00	METAL CHIP	33K 5% 1/10W
R247	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R248	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R249	1-216-295-00	METAL CHIP	0 5% 1/10W
R250	1-216-075-00	METAL CHIP	12K 5% 1/10W
R251	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R252	1-216-295-00	METAL CHIP	0 5% 1/10W
R253	1-216-075-00	METAL CHIP	12K 5% 1/10W
R254	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R255	1-216-063-00	METAL CHIP	3.9K 5% 1/10W
R256	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R257	1-216-079-00	METAL CHIP	18K 5% 1/10W
R258	1-216-045-00	METAL CHIP	680 5% 1/10W
R259	1-216-049-00	METAL CHIP	1K 5% 1/10W
R260	1-216-073-00	METAL CHIP	10K 5% 1/10W
R261	1-216-073-00	METAL CHIP	10K 5% 1/10W
R262	1-216-073-00	METAL CHIP	10K 5% 1/10W
R263	1-216-295-00	METAL CHIP	0 5% 1/10W
R264	1-216-295-00	METAL CHIP	0 5% 1/10W
R267	1-216-073-00	METAL CHIP	10K 5% 1/10W
R268	1-216-049-00	METAL CHIP	1K 5% 1/10W
R269	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
R270	1-216-641-11	METAL CHIP	390 0.5% 1/10W
R271	1-216-643-11	METAL CHIP	470 0.5% 1/10W
R272	1-216-049-00	METAL CHIP	1K 5% 1/10W

Ref. No.	Part No.	Description	Remark		
R273	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R274	1-216-063-11	METAL CHIP	3.3K	0.5%	1/10W
R275	1-216-053-11	METAL CHIP	1.2K	0.5%	1/10W
R276	1-216-295-00	METAL CHIP	0	5%	1/10W
R277	1-216-073-00	METAL CHIP	10K	5%	1/10W
R278	1-216-073-00	METAL CHIP	10K	5%	1/10W
R279	1-216-049-00	METAL CHIP	1K	5%	1/10W
R280	1-216-073-00	METAL CHIP	10K	5%	1/10W
R281	1-216-073-00	METAL CHIP	10K	5%	1/10W
R282	1-216-081-00	METAL CHIP	22K	5%	1/10W
R283	1-216-077-00	METAL CHIP	15K	5%	1/10W
R284	1-216-046-00	METAL CHIP	750	5%	1/10W
R285	1-216-043-00	METAL CHIP	560	5%	1/10W
R286	1-216-037-00	METAL CHIP	330	5%	1/10W
R287	1-216-049-00	METAL CHIP	1K	5%	1/10W
R288	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R289	1-216-049-00	METAL CHIP	1K	5%	1/10W
R290	1-216-049-00	METAL CHIP	1K	5%	1/10W
R291	1-216-063-00	METAL CHIP	3.3K	5%	1/10W
R297	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R298	1-216-097-00	METAL CHIP	100K	5%	1/10W
R299	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R301	1-216-295-00	METAL CHIP	0	5%	1/10W
R302	1-216-295-00	METAL CHIP	0	5%	1/10W
R305	1-216-083-91	METAL GLAZE	47K	5%	1/10W
R306	1-216-049-00	METAL CHIP	1K	5%	1/10W
R307	1-216-047-00	METAL CHIP	820	5%	1/10W
R308	1-216-049-00	METAL CHIP	1K	5%	1/10W
R309	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R310	1-216-295-00	METAL CHIP	0	5%	1/10W
R311	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R401	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R404	1-216-295-00	METAL CHIP	0	5%	1/10W
R405	1-216-295-00	METAL CHIP	0	5%	1/10W (AE, UB)
R407	1-163-031-11	CERAMIC CHIP	0.01M Ω		50V
R408	1-216-073-00	METAL CHIP	10K	5%	1/10W
R409	1-216-081-00	METAL CHIP	22K	5%	1/10W
R410	1-216-049-00	METAL CHIP	1K	5%	1/10W
R411	1-216-081-00	METAL CHIP	22K	5%	1/10W
R412	1-216-049-00	METAL CHIP	1K	5%	1/10W
R501	1-216-085-00	METAL CHIP	33K	5%	1/10W
R502	1-216-077-00	METAL CHIP	15K	5%	1/10W
R503	1-216-043-00	METAL CHIP	560	5%	1/10W
R504	1-216-039-00	METAL CHIP	390	5%	1/10W
R505	1-216-041-00	METAL CHIP	470	5%	1/10W
R506	1-216-049-00	METAL CHIP	1K	5%	1/10W
R507	1-216-049-00	METAL CHIP	1K	5%	1/10W
R508	1-216-073-00	METAL CHIP	10K	5%	1/10W
R509	1-216-043-00	METAL CHIP	560	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R510	1-216-073-00	METAL CHIP	10K	5%	1/10W
R511	1-216-043-00	METAL CHIP	560	5%	1/10W
R512	1-216-049-00	METAL CHIP	1K	5%	1/10W
R513	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R514	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R515	1-216-081-00	METAL CHIP	22K	5%	1/10W
R516	1-216-081-00	METAL CHIP	22K	5%	1/10W
R517	1-216-037-00	METAL CHIP	330	5%	1/10W
R518	1-216-041-00	METAL CHIP	470	5%	1/10W
R519	1-216-041-00	METAL CHIP	470	5%	1/10W
R520	1-216-037-00	METAL CHIP	330	5%	1/10W
R521	1-216-041-00	METAL CHIP	470	5%	1/10W
R522	1-216-041-00	METAL CHIP	470	5%	1/10W
R523	1-216-768-11	METAL CHIP	470K	0.50%	1/10W
R524	1-216-595-11	METAL CHIP	68K	0.5%	1/10W
R525	1-216-077-00	METAL CHIP	15K	5%	1/10W
R526	1-216-083-11	METAL CHIP	22K	0.5%	1/10W
R527	1-216-041-00	METAL CHIP	470	5%	1/10W
R528	1-216-073-00	METAL CHIP	10K	5%	1/10W
R529	1-216-073-00	METAL CHIP	10K	5%	1/10W
R530	1-216-043-00	METAL CHIP	560	5%	1/10W
R531	1-216-043-00	METAL CHIP	560	5%	1/10W
R532	1-216-068-00	METAL CHIP	6.2K	5%	1/10W
R533	1-216-043-00	METAL CHIP	560	5%	1/10W
R534	1-216-047-00	METAL CHIP	820	5%	1/10W
R535	1-216-054-00	METAL GLAZE	1.6K	5%	1/10W
R536	1-216-054-00	METAL GLAZE	1.6K	5%	1/10W
R537	1-216-049-00	METAL CHIP	1K	5%	1/10W
R538	1-216-049-00	METAL CHIP	1K	5%	1/10W
R539	1-216-033-00	METAL CHIP	220	5%	1/10W
R540	1-216-049-00	METAL CHIP	1K	5%	1/10W
R541	1-216-049-00	METAL CHIP	1K	5%	1/10W
R542	1-216-295-00	METAL CHIP	0	5%	1/10W
R546	1-216-073-00	METAL CHIP	10K	5%	1/10W
R547	1-216-049-00	METAL CHIP	1K	5%	1/10W
R550	1-216-754-11	METAL CHIP	120K	0.50%	1/10W
R551	1-216-041-00	METAL CHIP	470	5%	1/10W
R552	1-216-041-00	METAL CHIP	470	5%	1/10W
R553	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R555	1-216-049-00	METAL CHIP	1K	5%	1/10W
R556	1-216-041-00	METAL CHIP	470	5%	1/10W
R557	1-216-041-00	METAL CHIP	470	5%	1/10W
R558	1-216-081-00	METAL CHIP	22K	5%	1/10W
R559	1-216-047-00	METAL CHIP	820	5%	1/10W
R560	1-216-049-00	METAL CHIP	1K	5%	1/10W
R561	1-216-035-00	METAL CHIP	270	5%	1/10W
R562	1-216-049-00	METAL CHIP	1K	5%	1/10W
R563	1-216-049-00	METAL CHIP	1K	5%	1/10W
R564	1-216-285-00	METAL CHIP	0	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R565	1-216-049-00	METAL CHIP	1K	5%	1/10W
R566	1-216-049-00	METAL CHIP	1K	5%	1/10W
R567	1-216-037-00	METAL CHIP	330	5%	1/10W
R568	1-216-045-00	METAL CHIP	680	5%	1/10W
R569	1-216-073-00	METAL CHIP	10K	5%	1/10W
R570	1-216-049-00	METAL CHIP	1K	5%	1/10W
R572	1-216-085-00	METAL CHIP	33K	5%	1/10W
R573	1-216-081-00	METAL CHIP	22K	5%	1/10W
R574	1-216-049-00	METAL CHIP	1K	5%	1/10W
R575	1-216-045-00	METAL CHIP	680	5%	1/10W
R576	1-216-049-00	METAL CHIP	1K	5%	1/10W
R578	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R580	1-216-041-00	METAL CHIP	470	5%	1/10W
R581	1-216-041-00	METAL CHIP	470	5%	1/10W
R582	1-216-295-00	METAL CHIP	0	5%	1/10W
R586	1-216-645-11	METAL CHIP	560	0.5%	1/10W
R587	1-216-645-11	METAL CHIP	560	0.5%	1/10W
R588	1-216-049-00	METAL CHIP	1K	5%	1/10W
R589	1-216-045-00	METAL CHIP	680	5%	1/10W
R590	1-216-025-00	METAL CHIP	100	5%	1/10W
R591	1-216-045-00	METAL CHIP	680	5%	1/10W
R592	1-216-025-00	METAL CHIP	100	5%	1/10W
R593	1-216-049-00	METAL CHIP	1K	5%	1/10W
R594	1-216-073-00	METAL CHIP	10K	5%	1/10W
R595	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R596	1-216-081-00	METAL CHIP	22K	5%	1/10W
R597	1-216-025-00	METAL CHIP	100	5%	1/10W
R598	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R599	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R602	1-216-073-00	METAL CHIP	10K	5%	1/10W
R603	1-216-081-00	METAL CHIP	22K	5%	1/10W
R604	1-216-121-00	METAL CHIP	1M	5%	1/10W
R606	1-216-049-00	METAL CHIP	1K	5%	1/10W
R607	1-216-049-00	METAL CHIP	1K	5%	1/10W
R608	1-216-049-00	METAL CHIP	1K	5%	1/10W
R609	1-216-033-00	METAL CHIP	220	5%	1/10W
R610	1-216-043-00	METAL CHIP	500	5%	1/10W
R611	1-216-095-00	METAL CHIP	82K	5%	1/10W
R612	1-216-027-00	METAL CHIP	120	5%	1/10W
R613	1-216-041-00	METAL CHIP	470	5%	1/10W
R614	1-216-295-00	METAL CHIP	0	5%	1/10W
R615	1-216-081-00	METAL CHIP	22K	5%	1/10W
R616	1-216-081-00	METAL CHIP	22K	5%	1/10W
R617	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R618	1-216-013-00	METAL CHIP	33	5%	1/10W
R619	1-216-049-00	METAL CHIP	1K	5%	1/10W
R620	1-216-041-00	METAL CHIP	470	5%	1/10W
R622	1-216-049-00	METAL CHIP	1K	5%	1/10W
R623	1-216-041-00	METAL CHIP	470	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R624	1-216-049-00	METAL CHIP	1K	5%	1/10W
R625	1-216-049-00	METAL CHIP	1K	5%	1/10W
R626	1-216-049-00	METAL CHIP	1K	5%	1/10W
R627	1-216-295-00	METAL CHIP	0	5%	1/10W
R630	1-216-295-00	METAL CHIP	0	5%	1/10W
R631	1-216-025-00	METAL CHIP	100	5%	1/10W
R632	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R633	1-216-025-00	METAL CHIP	100	5%	1/10W
R634	1-216-049-00	METAL CHIP	1K	5%	1/10W
R635	1-216-049-00	METAL CHIP	1K	5%	1/10W
R636	1-216-045-00	METAL CHIP	580	5%	1/10W
R637	1-216-041-00	METAL CHIP	470	5%	1/10W
R640	1-216-073-00	METAL CHIP	10K	5%	1/10W
R657	1-216-033-00	METAL CHIP	220	5%	1/10W
R660	1-216-081-00	METAL CHIP	3.3K	5%	1/10W
R666	1-216-081-00	METAL CHIP	3.3K	5%	1/10W
R668	1-216-081-00	METAL CHIP	22K	5%	1/10W
R669	1-216-033-00	METAL CHIP	220	5%	1/10W
R670	1-216-295-00	METAL CHIP	0	5%	1/10W
R671	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R672	1-216-295-00	METAL CHIP	0	5%	1/10W
R673	1-216-081-00	METAL CHIP	22K	5%	1/10W
R674	1-216-035-00	METAL CHIP	270	5%	1/10W
R676	1-216-121-00	METAL CHIP	1M	5%	1/10W
R677	1-216-295-00	METAL CHIP	0	5%	1/10W
R680	1-216-295-00	METAL CHIP	0	5%	1/10W
R682	1-216-049-00	METAL CHIP	1K	5%	1/10W
R683	1-216-049-00	METAL CHIP	1K	5%	1/10W
R684	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R685	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R686	1-216-041-00	METAL CHIP	470	5%	1/10W
R687	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R701	1-216-043-00	METAL CHIP	560	5%	1/10W
R702	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R703	1-216-043-00	METAL CHIP	560	5%	1/10W
R704	1-216-043-00	METAL CHIP	560	5%	1/10W
R705	1-216-073-00	METAL CHIP	10K	5%	1/10W
R706	1-216-073-00	METAL CHIP	10K	5%	1/10W
R712	1-216-049-00	METAL CHIP	1K	5%	1/10W
R713	1-216-073-00	METAL CHIP	10K	5%	1/10W
R714	1-216-073-00	METAL CHIP	10K	5%	1/10W
R715	1-216-033-00	METAL CHIP	390	5%	1/10W
R716	1-216-047-00	METAL CHIP	820	5%	1/10W
R717	1-216-049-00	METAL CHIP	1K	5%	1/10W
R718	1-216-027-00	METAL CHIP	120	5%	1/10W
R719	1-216-043-00	METAL CHIP	560	5%	1/10W
R720	1-216-025-00	METAL CHIP	100	5%	1/10W
R721	1-216-041-00	METAL CHIP	470	5%	1/10W
R722	1-216-049-00	METAL CHIP	1K	5%	1/10W

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Ref. No.	Part No.	Description	Remark
R723	1-216-077-00	METAL CHIP	15K 5% 1/10W
R724	1-216-073-00	METAL CHIP	10K 5% 1/10W
R725	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R726	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
R728	1-216-049-00	METAL CHIP	1K 5% 1/10W
R729	1-216-295-00	METAL CHIP	0 5% 1/10W
R730	1-216-047-00	METAL CHIP	820 5% 1/10W
R731	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R732	1-216-049-00	METAL CHIP	1K 5% 1/10W
R733	1-216-077-00	METAL CHIP	15K 5% 1/10W
R734	1-216-060-00	METAL GLAZE	3K 5% 1/10W
R735	1-216-035-00	METAL CHIP	270 5% 1/10W
R736	1-216-035-00	METAL CHIP	270 5% 1/10W
R737	1-216-043-00	METAL CHIP	560 5% 1/10W
R738	1-216-043-00	METAL CHIP	560 5% 1/10W
R739	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R740	1-216-041-00	METAL CHIP	470 5% 1/10W
R741	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R742	1-216-073-00	METAL CHIP	10K 5% 1/10W
R743	1-216-073-00	METAL CHIP	10K 5% 1/10W
R744	1-216-081-00	METAL CHIP	22K 5% 1/10W
R745	1-216-083-00	METAL CHIP	27K 5% 1/10W
R746	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R747	1-216-049-00	METAL CHIP	1K 5% 1/10W
R748	1-216-023-00	METAL CHIP	82 5% 1/10W
R749	1-216-043-00	METAL CHIP	560 5% 1/10W
R750	1-216-025-00	METAL CHIP	100 5% 1/10W
R751	1-216-037-00	METAL CHIP	330 5% 1/10W
R752	1-216-041-00	METAL CHIP	470 5% 1/10W
R753	1-216-041-00	METAL CHIP	470 5% 1/10W
R754	1-216-073-00	METAL CHIP	10K 5% 1/10W
R755	1-216-073-00	METAL CHIP	10K 5% 1/10W
R756	1-216-081-00	METAL CHIP	22K 5% 1/10W
R757	1-216-085-00	METAL CHIP	33K 5% 1/10W
R758	1-216-049-00	METAL CHIP	1K 5% 1/10W
R759	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R760	1-216-081-00	METAL CHIP	22K 5% 1/10W
R761	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R762	1-216-043-00	METAL CHIP	560 5% 1/10W
R764	1-216-043-00	METAL CHIP	560 5% 1/10W
R765	1-216-049-00	METAL CHIP	1K 5% 1/10W
R766	1-216-073-00	METAL CHIP	10K 5% 1/10W
R767	1-216-073-00	METAL CHIP	10K 5% 1/10W
R769	1-216-295-00	METAL CHIP	0 5% 1/10W
R782	1-216-073-00	METAL CHIP	10K 5% 1/10W
R783	1-216-295-00	METAL CHIP	0 5% 1/10W
R801	1-216-295-00	METAL CHIP	0 5% 1/10W (AE UB)
R804	1-216-688-11	METAL CHIP	39K 0.5% 1/10W
R805	1-216-578-11	METAL CHIP	15K 0.5% 1/10W

Ref. No.	Part No.	Description	Remark
R806	1-216-295-00	METAL CHIP	0 5% 1/10W
R809	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R810	1-216-085-00	METAL CHIP	4.7K 5% 1/10W
R811	1-216-089-81	METAL GLAZE	47K 5% 1/10W
R812	1-216-596-11	METAL CHIP	51K 0.5% 1/10W
R813	1-216-081-00	METAL CHIP	3.3K 5% 1/10W
R818	1-216-285-00	METAL CHIP	0 5% 1/10W
R820	1-216-049-00	METAL CHIP	1K 5% 1/10W
R850	1-216-285-00	METAL CHIP	0 5% 1/10W
R900	1-808-354-11	THERMISTOR	NTC (2125)
R901	1-216-041-00	METAL CHIP	470 5% 1/10W
R902	1-216-073-00	METAL CHIP	10K 5% 1/10W
R903	1-216-776-11	METAL CHIP	1M 0.5% 1/10W
R904	1-216-041-00	METAL CHIP	470 5% 1/10W
R905	1-216-081-00	METAL CHIP	22K 5% 1/10W
R950	1-216-037-00	METAL CHIP	330 5% 1/10W
R951	1-216-073-00	METAL CHIP	10K 5% 1/10W
R952	1-216-097-00	METAL CHIP	300K 5% 1/10W
R951	1-216-295-00	METAL CHIP	0 5% 1/10W
R998	1-216-025-00	METAL CHIP	100 5% 1/10W

< VARIABLE RESISTOR >

RV101	1-241-393-21	RES, ADJ.	METAL GLAZE 2.2K
RV102	1-241-392-11	RES, ADJ.	METAL GLAZE 1K
RV103	1-241-392-11	RES, ADJ.	METAL GLAZE 1K
RV104	1-241-393-21	RES, ADJ.	METAL GLAZE 2.2K
RV105	1-241-393-21	RES, ADJ.	METAL GLAZE 2.2K
RV106	1-241-392-11	RES, ADJ.	METAL GLAZE 1K
RV107	1-241-395-11	RES, ADJ.	METAL GLAZE 10K
RV108	1-241-397-11	RES, ADJ.	METAL GLAZE 47K
RV109	1-241-396-11	RES, ADJ.	METAL GLAZE 22K
RV110	1-241-396-11	RES, ADJ.	METAL GLAZE 22K
RV111	1-241-396-11	RES, ADJ.	METAL GLAZE 22K
RV112	1-241-397-11	RES, ADJ.	METAL GLAZE 47K
RV113	1-241-396-11	RES, ADJ.	METAL GLAZE 22K
RV601	1-241-394-11	RES, ADJ.	METAL GLAZE 4.7K
RV602	1-241-394-11	RES, ADJ.	METAL GLAZE 4.7K
RV701	1-241-394-11	RES, ADJ.	METAL GLAZE 4.7K
RV702	1-241-391-11	RES, ADJ.	METAL GLAZE 470
RV703	1-241-391-11	RES, ADJ.	METAL GLAZE 470
RV705	1-241-392-11	RES, ADJ.	METAL GLAZE 1K

< VIBRATOR >

X101	1-577-117-11	VIBRATOR	CRYSTAL (4.43MHz)
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Ref. No.	Part No.	Description	Remark
*	A-7071-995-A	VP-38 (G) BOARD, COMPLETE (VC)	

		(Ref.No 4,000 series)	
		< CAPACITOR >	
C801	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C802	1-126-157-11	ELECT	10uF 20% 16V
C803	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C804	1-163-239-11	CERAMIC CHIP	33PF 5% 50V
C805	1-163-239-11	CERAMIC CHIP	33PF 5% 50V
C806	1-163-989-11	CERAMIC CHIP	0.033uF 10% 25V
C807	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C808	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C809	1-126-157-11	ELECT	10uF 20% 16V
		< FILTER >	
CF901	1-567-192-11	OSCILLATOR, CERAMIC (4.00MHz)	
		< CONNECTOR >	
CN901	1-573-824-11	CONNECTOR, BOARD TO BOARD 10P	
		< IC >	
IC901	8-759-147-30	IC uPD75004-GB-532-384	
IC902	8-759-030-60	IC SDA5642	
		< COIL >	
L901	1-408-982-11	INDUCTOR 100uH	
		< RESISTOR >	
R901	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R902	1-216-073-00	METAL CHIP	10K 5% 1/10W
R903	1-216-073-00	METAL CHIP	10K 5% 1/10W
R904	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R905	1-216-121-00	METAL CHIP	1M 5% 1/10W
R907	1-216-119-00	METAL CHIP	820K 5% 1/10W
R908	1-216-037-00	METAL CHIP	100K 5% 1/10W
R909	1-216-056-00	METAL CHIP	5.1K 5% 1/10W
R910	1-216-119-00	METAL CHIP	820K 5% 1/10W
R911	1-216-025-00	METAL CHIP	100 5% 1/10W
R912	1-216-295-00	METAL CHIP	0 5% 1/10W
R913	1-216-049-00	METAL CHIP	1K 5% 1/10W
R914	1-216-049-00	METAL CHIP	1K 5% 1/10W
R915	1-216-049-00	METAL CHIP	1K 5% 1/10W
R916	1-216-049-00	METAL CHIP	1K 5% 1/10W
R917	1-216-049-00	METAL CHIP	1K 5% 1/10W
R921	1-216-295-00	METAL CHIP	0 5% 1/10W

Ref. No.	Part No.	Description	Remark
*	A-7063-923-A	WC-10 (G) BOARD, COMPLETE	

		(Ref.No 2,000 series)	
		< CAPACITOR >	
C003	1-126-154-11	ELECT	47uF 20% 6.3V
C020	1-126-153-11	ELECT	4.7uF 20% 50V
C028	1-163-121-00	CERAMIC CHIP	150PF 5% 50V
C030	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C031	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C032	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C033	1-163-035-00	CERAMIC CHIP	0.047uF 50V
C034	1-163-036-00	CERAMIC CHIP	0.068uF 50V
C035	1-163-036-00	CERAMIC CHIP	0.068uF 50V
C037	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C038	1-163-023-00	CERAMIC CHIP	0.015uF 5% 50V
C042	1-163-986-00	CERAMIC CHIP	0.027uF 10% 25V
C043	1-163-135-00	CERAMIC CHIP	560PF 5% 50V
C046	1-163-121-00	CERAMIC CHIP	150PF 5% 50V
C047	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C048	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C049	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C051	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C052	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C053	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C054	1-163-036-00	CERAMIC CHIP	0.068uF 50V
C055	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C056	1-163-036-00	CERAMIC CHIP	0.068uF 50V
C057	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C059	1-126-154-11	ELECT	47uF 20% 6.3V
C060	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C062	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C063	1-163-093-00	CERAMIC CHIP	10PF 5% 50V
C064	1-126-154-11	ELECT	47uF 20% 6.3V
C065	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C067	1-126-154-11	ELECT	47uF 20% 6.3V
C068	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C069	1-163-319-00	CERAMIC CHIP	0.1uF 50V
C070	1-163-319-11	CERAMIC CHIP	0.1uF 50V
C072	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C075	1-126-154-11	ELECT	47uF 20% 6.3V
C077	1-126-154-11	ELECT	47uF 20% 6.3V
C078	1-163-121-00	CERAMIC CHIP	150PF 5% 50V
C079	1-126-154-11	ELECT	47uF 20% 6.3V
C081	1-126-154-11	ELECT	47uF 20% 6.3V
C085	1-163-241-11	CERAMIC CHIP	39PF 5% 50V

Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
CW001	1-573-824-11	CONNECTOR. BOARD TO BOARD 10P	
CW002	1-573-830-11	CONNECTOR. BOARD TO BOARD 15P	
< DIODE >			
D001	8-719-104-34	DIODE 1S2836	
< FILTER >			
FLD001	1-406-688-11	DELAY LINE. LC	
FLD002	1-406-909-21	LINE. LC DELAY	
< IC >			
IC001	8-753-300-71	IC HD14053BFP	
IC003	8-753-048-22	IC MS2350FP	
< COIL >			
L005	1-410-383-31	INDUCTOR CHIP 15uH	
< TRANSISTOR >			
Q002	8-729-010-25	TRANSISTOR MSD601-RT1	
Q003	8-729-010-25	TRANSISTOR MSD601-RT1	
Q006	8-729-010-25	TRANSISTOR MSD601-RT1	
Q008	8-729-010-25	TRANSISTOR MSD601-RT1	
Q009	8-729-010-25	TRANSISTOR MSD601-RT1	
Q010	8-729-010-25	TRANSISTOR MSD601-RT1	
Q011	8-729-010-05	TRANSISTOR MSB709-RT1	
Q012	8-729-010-25	TRANSISTOR MSD601-RT1	
Q013	8-729-010-25	TRANSISTOR MSD601-RT1	
Q014	8-729-421-19	TRANSISTOR UN2213	
Q017	8-729-010-25	TRANSISTOR MSD601-RT1	
Q018	8-729-010-05	TRANSISTOR MSB709-RT1	
< RESISTOR >			
R001	1-216-045-00	METAL CHIP 680 5% 1/10W	
R002	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R005	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R006	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R010	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R012	1-216-043-00	METAL CHIP 560 5% 1/10W	
R013	1-216-037-00	METAL CHIP 330 5% 1/10W	
R017	1-216-039-00	METAL CHIP 390 5% 1/10W	
R022	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R028	1-216-039-00	METAL CHIP 390 5% 1/10W	
R029	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R030	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R031	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R037	1-216-039-00	METAL CHIP 390 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R038	1-216-056-00	METAL CHIP 1.8K 5% 1/10W	
R039	1-216-039-00	METAL CHIP 390 5% 1/10W	
R041	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R042	1-216-048-00	METAL CHIP 910 5% 1/10W	
R043	1-216-631-11	METAL CHIP 150 0.5% 1/10W	
R048	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R049	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R050	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R051	1-216-066-00	METAL CHIP 4.7K 5% 1/10W	
R052	1-216-073-60	METAL CHIP 10K 5% 1/10W	
R053	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R054	1-216-066-00	METAL CHIP 33K 5% 1/10W	
R055	1-216-094-00	METAL GLAZE 75K 5% 1/10W	
R056	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R057	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R058	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R061	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R062	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R065	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R066	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R067	1-216-295-00	METAL CHIP 0 5% 1/10W	
R070	1-216-045-00	METAL CHIP 680 5% 1/10W	
R071	1-216-295-00	METAL CHIP 0 5% 1/10W	
R073	1-216-295-00	METAL CHIP 0 5% 1/10W	
R074	1-216-295-00	METAL CHIP 0 5% 1/10W	
R075	1-216-651-11	METAL CHIP 1K 0.5% 1/10W	
R076	1-216-048-00	METAL CHIP 910 5% 1/10W	
R077	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R079	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R080	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R089	1-216-045-00	METAL CHIP 680 5% 1/10W	
R091	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R092	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R093	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R094	1-216-045-00	METAL CHIP 680 5% 1/10W	
R096	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R097	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
< VARIABLE RESISTOR >			
RV001	1-238-856-11	RES. ADJ. CERMET 10K	
RV002	1-238-856-11	RES. ADJ. CERMET 10K	
RV003	1-238-856-11	RES. ADJ. CERMET 100K	

Ref. No.	Part No.	Description	Remark
MISCELLANEOUS			

31	1-467-238-31	REMOTE COMMANDER (RMT-V1388)	
63	1-751-601-11	CABLE, FLAT (FMT-2) 27P	
65	1-765-141-11	CABLE, FLAT (FMT-7) 25P	
△103	1-251-134-11	INLET, AC (NONPOLAR)	
204	1-691-254-13	CONNECTOR, TRANSLATION 10P	
205	1-691-471-11	CONNECTOR, TRANSLATION 11P	
215	1-764-137-11	CONNECTOR, TRANSLATION 15P	
318	1-692-488-11	SWITCH, ROTARY	
△F001	1-576-228-11	FUSE, GLASS TUBE (250V/2A)	
M001	A-7048-696-A	DRUM ASSY (DGH-090A-R)	
M902	8-835-488-01	MOTOR, DC SCE-0501A	
M903	X-3942-946-1	MOTOR ASSY, CAM	
M904	A-6759-573-A	MOTOR BLOCK ASSY, TRAY	

HARDWARE LIST

#1	7-685-648-79	SCREW, TAPPING *BVTP 3X12 TYPE2, IT-3
#2	7-521-770-67	SCREW -BVTT 2.6X6 (S)
#3	7-682-045-01	SCREW *PS 3X4
#5	7-624-105-04	STOP RING 2.3, TYPE -E
#6	7-685-545-14	SCREW *BVTP 3X6 TYPE2 IT-3
#7	7-621-772-08	SCREW *6 2X3
#8	7-628-253-15	SCREW *PS 2X5
#9	7-685-645-79	SCREW *BVTP 3X6 TYPE2 IT-3
#11	7-688-003-01	W 3, SMALL
#12	7-688-001-01	W 2, MIDDLE
#13	7-685-104-19	*PTP 2X6
#14	7-685-647-79	SCREW *BVTP 3X10

Ref. No.	Part No.	Description	Remark
ACCESSORIES & PACKING MATERIALS			

	1-467-238-31	REMOTE COMMANDER (RMT-V1388)	
△	1-574-056-11	CORD, POWER (VC)	
△	1-575-131-11	CORD, POWER (NP, AE)	
△	1-575-132-11	CORD, POWER (B)	
	1-575-334-11	CORD (WITH CONNECTOR) (STEREO AV CABLE)	
△	1-590-686-21	CORD, POWER (UB)	
	1-695-593-11	CORD, CONNECTION (AERIAL CABLE)	
		(VC, AE, NP, UB)	
	1-695-651-11	CORD, CONNECTION (AUDIO CABLE)	
	1-695-905-11	CORD, CONNECTION (AERIAL CABLE) (B)	
	1-751-497-21	CORD, CONNECTION (S VIDEO CABLE)	
	1-751-739-21	CORD, CONNECTION (LANC CONTROL (I) CABLE)	
	3-695-308-01	DRIVER, VOLUME	
	3-710-901-11	SCREW, TAPPING (UB)	
	3-758-350-11	MANUAL, INSTRUCTION (ENGLISH) (UB)	
	3-758-350-41	MANUAL, INSTRUCTION	
		(DANISH, PORTUGUESE, SWEDISH) (NP)	
	3-758-350-51	MANUAL, INSTRUCTION (SPANISH) (NP)	
	3-758-350-61	MANUAL, INSTRUCTION (DUTCH) (NP, AE)	
	3-758-350-71	MANUAL, INSTRUCTION (FRENCH) (VC, NP, B)	
	3-758-350-81	MANUAL, INSTRUCTION (GERMAN) (VC, NP, B)	
	3-758-350-91	MANUAL, INSTRUCTION (ITALIAN) (VC, AE)	
*	3-955-848-01	CUSHION (UPPER)	
*	3-955-849-01	CUSHION (LOWER)	
*	3-958-130-01	INDIVIDUAL CARTON	
*	9-910-999-32	SHEET, PROTECTION	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 6

INTERFACE AND IC PIN FUNCTION

6-1. SYSTEM CONTROL — VIDEO · AUDIO BLOCK INTERFACE (MA-173 BOARD)

Signal	Pin No.	I/O	VTR MODE												
			STOP	FF	REW	X2 ×4	-X2 -X4	PB	X1 (AUDIO MUTE)	PICTURE SEARCH (H) CUE (H) REVIEW	PB • PAUSE	SLOW	REVERSE SLOW	REC	REC PAUSE
SP/LP	IC003 ⑧	O	*1	H	H	*1	*2	*2	*2	*2	*2	*1	*1	*1	H/L
VA PB MODE	IC003 ⑨	O	L	L	L	H	H	H	H	H	H	H	H	L	L
JOG VD *3	IC003 ②	O	L	L	L	L	L	L	L	L	L	L	L	L	L
RF PB MODE	IC003 ⑤	O	L	L	L	L	L	L	L	L	L	L	L	H	L
FE ON	IC003 ⑥	O	H	H	H	H	H	H	H	H	H	H	H	L	H
RF SWP	IC003 ③	O	L	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4
JOG	IC003 ④	O	L	L	L	H	H	L	H	H	H	H	H	L	L
SP/LP DET	IC003 ⑦	I	L	*5	*5	*5	*5	L	L	*5	*5	—	—	H	H
CLOG DET	IC003 ⑩	I	H	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	H	*6
DI COMP SYNC	IC003 ⑪	I	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7
AUDIO PB	IC003 ④	O	L	L	L	*8	*8	H	*8	*8	*8	*8	*8	L	L
AFM MUTE	IC003 ⑦	O	L	L	L	H	H	L	H	H	H	H	H	L	L
VIDEO CS	IC003 ⑤	O													
S02	IC003 ⑨	O													
SCK2	IC003 ⑩	O													
			V-cycle "Low" pulse												
			V-cycle pulse rank												
			V-cycle "Low" pulse rank												

V-cycle "Low" pulse

V-cycle pulse rank

V-cycle "Low" pulse rank

- * 1. This outputs the result of determining what was the previous mode.
 "High" output in SP mode, "Low" output in LP mode.
- * 2. This outputs the result of determining which record mode the playback tape has.
- * 3. Pseudo VD signal (However, only in after record mode).
- * 4. Pulse of 23Hz, 50% duty (synchronized with the rotation of the drum).
- * 5. "High" at the SP record portion and "Low" at the LP record portion of tape.
- * 6. "High" at the blank portion or at any drop out portion of tape.
 Head clogging detection input.
- * 7. Composite synch signal input separated from line input video signal, camera video signal or playback video signal. (This signal has positive polarity).
- * 8. "Low" during shuttle editing from REC PAUSE, "High" while in any other mode.
- * 9. This varies according to SP/LP switching. It becomes "High" when SP mode is entered and "Low" when LP mode is entered.

6.2. MECHANICAL CONTROL — SERVO BLOCK INTERFACE (MA-173 BOARD)

Signal	Pin No.	I/O	VTR MODE											REC PAUSE
			STOP	FF	REW	X2	--X2	PB	PICTURE SEARCH	REVIEW	PB PAUSE	SLOW	REVERSE SLOW	
T. REEL FG	IC002 ④	I	—	*1	*1	*1	*1	*1	*1	*1	—	*1	*1	*
S. REEL FG	IC002 ⑤	I	—	*1	*1	*1	*1	*1	*1	*1	—	*1	*1	—
ATF ERROR	IC002 ⑥	I	—	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2
DRUM PG	IC002 ⑦	I	—	*3	*3	*3	*3	*3	*3	*3	*3	*3	*3	*3
DRUM FG	IC002 ⑧	I	—	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4
CAP FG/HMS CAP FG	IC002 ⑨ ⑩	I	—	*5	*5	*5	*5	*5	*5	*5	—	*5	*5	—
CAP ON	IC002 ⑪	O	L	H	H	H	H	H	H	H	L	*8	H	L
REF PILOT	IC002 ⑫	O	*7	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6
RP PB MODE	IC002 ⑬	O	L	L	L	L	L	L	L	L	L	L	L	L
DRUM RVS *11	IC002 ⑭	O	H	H	H	H	H	H	H	H	H	H	H	H
CAP FWD	IC002 ⑮	O	L	H	L	H	L	H	L	L	L	*8	H	L
DRUM PWM	IC002 ⑯	O	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10
CAP PWM	IC002 ⑰	O	L	*10	*10	*10	*10	*10	*10	*10	L	*10	*10	L

* 1. The amplitude modulated pulse is input by the rotation of the reel.

* 2. ATF error voltage input.

* 3. Approximately 25Hz.

* 4. Approximately 150Hz.

* 5. 320 FG pulses are input by one rotation of the capstan. Approximately

1325Hz during REC/PB (SP) mode.

* 6. Four frequencies are output as synchronized with the rotation of the drum.

f1=101.02kHz, f2=117.19kHz, f3=162.76kHz, f4=146.48kHz

* 7. f1(101.02kHz) or f3(162.76kHz) is output.

* 8. "High" pulse when tape is delivered.

* 9. "Low" pulse when tape is delivered.

* 10. PWM signal with a period.

* 11. Normally "High". Temporarily "Low" when a full top cassette is loaded (drum reverse rotation).

6-3. MECHANICAL CONTROL MICRO COMPUTER CXP87140 (WA-173 BOARD IC003) PORT FUNCTION DESCRIPTION

Pin No.	Signal	I/O	Function
1	VIBS	O	Teletext killer.
2	JOCH VD	O	Pseudo V timing output in speed change playback mode.
3	DJHG	O	Video memory write control.
4	JOG	O	"H" in speed change playback mode.
5	RF PB MODE	O	"L" in any mode other than record mode.
6	FEON	O	"L" when flying erase is turned ON.
7	INTERNAL VD	O	Internal VD.
8	SP	O	"H" in SP mode.
9	XENV REQ	O	Envelope detect waveform control.
10	TRSW	I	Tray open/close button input.
11	N.C.	I	Not used.
12	PCM ACT	I	"H" when PCM is effective.
13	C DOWN SW	I	Cassette down switch input.
14	REC PRE SW	I	Picture record inhibit switch input.
15	ME MP SW	I	ME/MP switch input.
16	MPHG MP SW	I	MPHG/MP switch input.
17	8/9 SW	I	8/9 switch input.
18	10/13 SW	I	10/13 switch input.
19	MODE 3 SW	I	Mechanical deck MATRIX input.
20	MODE 2 SW	I	Mechanical deck MATRIX input.
21	MODE 1 SW	I	Mechanical deck MATRIX input.
22	MODE 0 SW	I	Mechanical deck MATRIX input.
23	STB	O	Strobe signal output to EVR.
24	VIDEO CS	O	CS output to video IC.
25	VIDEO CS	O	CS output to video IC.
26	VSC CS	O	CS output to VSC IC.
27	PCM CS	O	CS output to PCM IC.
28	MEMORY CS	O	CS output to memory control IC.
29	PCM SEL 1	O	Audio output control.
30	PCM SEL 2	O	Audio output control.
31	N.C.	O	Not used.
32	N.C.	O	Not used.
33	PCM PB	O	"H" in PCM playback mode.
34	N.C.	O	Not used.
35	INSEL 2	O	Input signal select.
36	INSEL 1	O	Input signal select.
37	AF REC	O	After record control.
38	TOP/END LED	O	Tape top/end sensor LED control.
39	GND		GND.

Pin No.	Signal	I/O	Function
40	RESET	I/O	Reset input.
41	VSS		GND.
42	16M XTAL	O	16M XTAL.
43	16M XTAL	I	16M XTAL.
44	COSMO CS	I	CS input for communication with MC microcomputer.
45	SI BUS	I	Data input for communication with MC microcomputer.
46	SO BUS	O	Data output for communication with MC microcomputer.
47	SC	I	Clock input for communication with MC microcomputer.
48	TR LOAD	O	Tray in control output.
49	TR UNLOAD	O	Tray out control output.
50	HIS DET	I	HIS discrimination input.
51	AFM MODE DET	I	Audio multiplex discrimination input.
52	A VSS		Analog GND.
53	A VREF		Analog reference 5V.
54	A VDD		Analog VDD 5V.
55	TR IN	I	Tray state switch input (IN). Analog input.
56	TR OUT	I	Tray state switch input (OUT). Analog input.
57	PB SP DET	I	In playback mode, SP/LP discrimination input is "H" for SP.
58	N.C.	I	Not used.
59	TOP S	I	Tape top determination input. Analog input.
60	END S	I	Tape end determination input. Analog input.
61	ATF EER	I	ATF error input. Analog input.
62	THERM	I	Temperature compensation input. Analog input.
63	N.C.	I	Not used.
64	S REEL F6	I	S reel FG input.
65	CLOG DET	I	Clag detect input.
66	DI SYNC	I	Composite sync input.
67	T REEL FG	I	T reel FG input.
68	DRUM PG	I	Drum PG input.
69	DRUM PG	I	Drum PG input.
70	CAP PG	I	Capstan PG input.
71	V MUTE	O	Video mute output.
72	AFM MUTE	O	AFM MUTE output.
73	MECHA INH	O	Output signal which is supplied during mechanism transit.
74	DRUM RVS	O	Drum direction control output.
75	CAP PWM	O	PWM output for capstan.
76	DRUM PWM	O	PWM output for drum.
77	HMS CAP PG	I	Capstan PG input for HMS counter.

Pin No.	Signal	I/O	Function
78	ATF CLK	O	Output for ATF clock.
79	C S12	I	Communication data input for specific peripheral IC.
80	C S02	O	Communication data output for specific peripheral IC.
81	C SCK2	O	Communication clock output for specific peripheral IC.
82	AFM OUTSEL	O	AFM output control "H", "L" and "M" levels.
83	AFM MODE	O	AFM mode control "H", "L" and "M" levels.
84	AUDIO PB	O	"H" in audio playback mode.
86	REF PILOT	O	ATF pilot output.
86	XTAL	I	Xtal 12MHz.
87	EXTAL	O	Xtal 12MHz.
88	VSS		GND.
89	VDD		+5V.
90	N. C.	O	Not used.
91	CAP ON	O	Captain ON signal.
92	CAP PWD	O	Captain direction select signal.
93	DRUM ACC	O	Drum acceleration signal.
94	DRUM BRK	O	Drum brake signal.
95	CAM LOAD	O	Cassette compartment motor control.
96	CAM UNLOAD	O	Cassette compartment motor control.
97	EDIT	O	"L" in edit mode.
98	VA PB MODE	O	"H" in playback mode.
99	RF SWP	O	RF switching pulse output.
100	PERA	O	Flying area RUC area.

6.4. MODE CONTROL MICRO COMPUTER MB89096 (MA-173 BOARD IC002)

PORT FUNCTION DESCRIPTION

Pin No.	Signal	I/O	Function
1	XTAL 2K	0	32KHz oscillator connecting pin.
2	EXTAL 2K	1	
3	MOD 0	1	Connected to ground.
4	MOD 1	1	Connected to ground.
5	XTAL 12M	0	12MHz main oscillator connecting pin.
6	EXTAL 12M	1	
7	VSS	0	GND.
8	MC RESET	1	Reset signal input (from TT OSDs-com).
9	LANC P CONT	0	LANC IC power control.
10	S/TUNE	0	Switch output between Linc Video input and S/V.
11	NICAM/MAIN (NP, UB model)	0	APM select in NICAM.
	F PAL (B model)	0	Transcoder force PAL.
12	TUNER ON (VC, NT, UB model)	0	Tuner power control.
13	SYS 2 (B model)	0	Tuner system \overline{E}/L select output (B model only).
14	COSMO CS	0	CS output for communications with system control.
15	COSMO REST	0	System control reset signal output.
16	HITTS CS	0	TT microcomputer chip select signal.
17	POWER FAIL	1	Power failure detect input.
18	CG YD	1	V sync signal input.
19	EURO S/V	0	EURO AV output S/V select signal.
20	C+ DET	1	CANAL+ detect signal input.
21	C+ DATA	0	CANAL+ control signal.
22	C+ CLK	0	CANAL+ control signal.
23	SCL	1	PC BUS clock.
24	SDA	1	PC BUS clock.
25	H18 LED	0	H18 LED control.
26	N. C.	0	Not used.
27	REC LED	0	REC LED control.
28	0V	0	GND.
29	TV/TVR (AV CONT)	0	EURO AV input select output.
30	SYS RESET	0	SYSTEM RESET OUTPUT.
31	TIMER LED	0	TIMER REC LED control.
32	SIRCS IN	1	SIRCS signal input.
33	LANC VP	1	LANC wakeup pin.
34	EVR STB	0	D/A strobe signal for EVR (MA-173 board IC010).
35	VPS LED	0	VPS LED control.

Pin No.	Signal	I/O	Function
36	JOG 1	1	JOG dial port input.
37	JOG 2	1	JOG dial port input.
38	MC V OUT	0	V sync signal output.
39-48	N. C.	0	N. C.
49	VCC	+5V	
50-52	N. C.	0	N. C.
53	VFDIP	+5V	
54-57	N. C.	0	N. C.
58	VSS	GND	
59-66	N. C.	0	N. C.
67	VCC	+5V	
68-74	N. C.	0	N. C.
75	N. C.	0	N. C.
76	RF MOD ON	0	RF modulator power control.
77	MC SI	1	Serial data input.
78	MC SO	0	Serial data output.
79	MC SCK	0	Clock output for serial communication.
80	MEM CS	0	EEPROM chip select signal output (MA-173 board IC004).
81	MEM CLK	0	EEPROM clock output (MA-173 board IC004).
82	MEM DATA	I/O	EEPROM data in/output (MA-173 board IC004).
83	AVSS	GND	
84-91	A/D0-A/D7	1	A/D input for key read.
92	AVCC	+5V	
93	DST	1	VC: 0V, NP: approx 0.9V, AB: approx 2V, UB: approx 2.9V, B: approx 3.9V.
94	S SW INPUT	1	S terminal input determination detect input.
95	N. C.	0	N. C.
96	INSEL 3	0	CANAL+ input select.
97	LANC IN	1	LANC input.
98	LANC OUT	0	LANC output.
99	TA MUTE	0	U/V tuner mute.
100	VCC	+5V	

6-5. TIMER/TUNER CONTROL MICRO COMPUTER MB89096 (FM-16 BOARD IC101)

PORT FUNCTION DESCRIPTION

Pin No.	Signal	I/O	Function
1	XTAL 28K	O	32.8KHz oscillator connecting pin.
2	XTAL 28K	I	
3	MOD 0	I	Connected to ground.
4	MOD 1	I	Connected to ground.
5	XTAL 10M	O	10MHz main oscillator connecting pin.
6	XTAL 10M	I	
7	VSS	GND	
8	RESET SW	I/O	Reset signal input.
9	PLL ENABLE	O	Enable output for U/V tuner frequency setting.
10	PLL DATA	O	Data output for U/V tuner frequency setting.
11	PLL CLOCK	O	Clock output for U/V tuner frequency setting.
12	VPS CS	O	CS output for VPS microcomputer.
13	N. C.	O	N. C.
14	TIME AF REC LED	O	Time code after record LED control output.
15	MC RESFT	O	Reset output for MC microcomputer which is driven "L" to reset.
16	HTT CS	I	CS input for communications with MC microcomputer.
17	POWER FAIL	I	Power failure detect input which is driven "L" when power failure is detected.
18	V SYNC	I	V synchronize output from MC microcomputer.
19	TUNER V DET	I	V detect input from U/V tuner.
20	CG CS	O	CS output for character generator control.
21	AF REC LED	O	PCM after record LED control output.
22	POWER FAIL OUT	O	Power failure detect output which is driven "L" when power failure is detected.
23	N. C.	O	N. C.
24	VH LED	O	Video boost LED control.
25	CASSET LED	O	Cassette in LED control.
26	N. C.	O	N. C.
27	N. C.	O	N. C.
28	IV	O	Connected to ground.
29	MC SO	I	Data input for communications with MC microcomputer.
30	MC SI	O	Data output for communications with MC microcomputer.
31	MC SCK	I	Clock input for communications with MC microcomputer.
32	LCY CS	O	CS output for LCD controller.
33	N. C.	O	N. C.
34	CG V DET	I	Signal presence determination input (Blue back).
35	N. C. (LCD BL CONT)	O	Fixed "L" in the present.
36	N. C.	O	N. C.
37	N. C.	O	N. C.

Pin No.	Signal	I/O	Power on: H	Function
38	POWER CONT	O		
39-48	S01-S19	O		FDP segment 01-19/Display tube control signal.
49	VCC		+5V.	
50-52	S13-S15	O		FDP segment 11-13/Display tube control signal.
53	VDDP		-VDDP for display tube.	
54-57	S14-S17	O		FDP segment 14-17/Display tube control signal.
58	VSS		GND.	
59-61	S18-S20	O		FDP segment 18-20/Display tube control signal.
62-66	G12-G16	O	+5V.	FDP grid 12-16/Display tube control signal.
67	VCC			
68-74	G17-G21	O		FDP grid 17-21/Display tube control signal.
75	N. C.	O	N. C.	
76	N. C.	O	N. C.	
77	TT OSD SI	I		Serial data input for character generator, VPS and LCD.
78	TT OSD SO	O		Serial data output for character generator, VPS and LCD.
79	TT OSD SCK	O		Serial communication clock output for character generator, VPS and LCD.
80	MEM CS	O		EEPROM chip select signal output. (FM-16 board IC103).
81	MEM CLK	O		EEPROM clock output. (FM-16 board IC103).
82	MEM DATA	I/O		EEPROM data in/output. (FM-16 board IC103).
83	AVSS		GND.	
84	AFT IN	I	V/C signal AFT input.	
85	N. C.	I	N. C.	
86	N. C.	O	N. C.	
87	N. C.	O	N. C.	
88	PCM LED	O		PCM LED control.
89	HIF LED	O		HIF LED control.
90	TBC LED	O		TBC LED control.
91	DNR LED	O		DNR LED control.
92	AVCC		+5V.	
93	N. C.	O	N. C.	
94	STANDBY LED	O		Standby LED control.
95	N. C.	O	N. C.	
96	REMOTE LED	O		Remote LED control.
97	N. C.	O	N. C.	
98	N. C.	O	N. C.	
99	BUZZER OUT	O		Buzzer out.
100	VCC		+5V.	

6-6. PCM/AFM AUDIO OUTPUT CONTROL

1) PB MODE OUTPUT CONTROL

1-1) PCM POSITION (AUDIO MONITOR SW)

PCM POSITION (AUDIO MONITOR SW)											
PCM ON/OFF	PCM ID	AFM MODE DET	MAIN/SUB	DISPLAY	OUTPUT PATTERN (MA-173 BOARD)						
					PCM SEL1 IC003②	PCM SEL2 IC003③	OUT SEL3 IC001②	OUT SEL4 IC001③	AFM OUT SEL IC003②	AFM MUTE IC003③	AFM MODE IC003④
ON	STEREO	—	STEREO	STEREO	H	H	L	L	—	H	—
			L	L	L	L	L	L	—	H	—
			R	R	L	H	L	L	—	H	—
	BILINGUAL	—	MAIN+SUB	MAIN+SUB	H	H	L	L	—	H	—
			MAIN	MAIN	H	L	L	L	—	H	—
			SUB	SUB	L	H	L	L	—	H	—
MONO	—	No change	—	H	H	L	L	—	H	—	
OFF	—	L	STEREO	STEREO	L	L	L	L	L	L	M
			L	L	L	L	L	L	H	L	M
			R	R	L	L	L	L	M	L	M
	—	H	MAIN+SUB	MAIN+SUB	L	L	L	L	L	L	M
			MAIN	MAIN	L	L	L	L	H	L	M
			SUB	SUB	L	L	L	L	M	L	M
	—	M	No change	—	L	L	L	L	H	L	M

1) PB MODE OUTPUT CONTROL

1-2) MIX POSITION (AUDIO MONITOR SW)

PCM FUNCTION MODES (EXCEPT SW)					OUTPUT PATTERN (MA-173 BOARD)							
PCM ON/OFF	PCM ID	AFM MODE DET	MAIN/SUB	DISPLAY	PCM SEL1	PCM SEL2	OUT SEL3	OUT SEL4	AFM OUT SEL	AFM MUTE	AFM MODE	
					IC003②	IC003③	IC001②	IC001③	IC003②	IC003③	IC003④	
ON	STEREO	L (STEREO)	STEREO	STEREO	H	H	L	L	L	L	M	
			L	L	H	L	L	L	H	L	M	
			R	R	L	H	L	L	M	L	M	
		H (BILINGUAL)	STEREO	STEREO	H	H	L	L	L	L	M	
			L	L	H	L	L	L	H	L	M	
			R	R	L	H	L	L	M	L	M	
		M (MONO)	STEREO	STEREO	H	H	L	L	H	L	M	
			L	L	H	L	L	L	H	L	M	
			R	R	L	H	L	L	H	L	M	
	BILINGUAL	L (STEREO)	MAIN+SUB	MAIN+SUB	H	H	L	L	L	L	M	
			MAIN	MAIN	H	L	L	L	H	L	M	
			SUB	SUB	L	H	L	L	M	L	M	
		H (BILINGUAL)	MAIN+SUB	MAIN+SUB	H	H	L	L	L	L	M	
			MAIN	MAIN	H	L	L	L	H	L	M	
			SUB	SUB	L	H	L	L	M	L	M	
		M (MONO)	MAIN+SUB	MAIN+SUB	H	H	L	L	H	L	M	
			MAIN	MAIN	H	L	L	L	H	L	M	
			SUB	SUB	L	H	L	L	H	L	M	
	MONO	—	—	No display	H	H	L	L	H	L	M	

1) PB MODE OUTPUT CONTROL

1-3) MIX POSITION (AUDIO MONITOR SW) STD POSITION

PCM ON/OFF	PCM ID	AFM MODE DET	MAIN/SUB	DISPLAY	OUTPUT PATTERN (MA-173 BOARD)							
					PCM SEL1	PCM SEL2	OUT SEL3	OUT SEL4	AFM OUT SEL	AFM MUTE	AFM MODE	AFM MODE
OFF	—	L	STEREO	STEREO	L	L	L	L	L	L	L	M
			L	L	L	L	L	L	H	L	M	
			R	R	L	L	L	L	M	L	M	
	—	H	MAIN+SUB	MAIN+SUB	L	L	L	L	L	L	M	
			MAIN	MAIN	L	L	L	L	H	L	M	
			SUB	SUB	L	L	L	L	M	L	M	
	—	M	No change	—	L	L	L	L	H	L	M	

• See EE mode when in after record mode.

2) EE MODE OUTPUT CONTROL

INPUT STEREO/ BILINGUAL MODE	AUDIO MONITOR SW	MAIN/SUB	DISPLAY	OUTPUT PATTERN (MA-173 BOARD)							
				PCM SEL1	PCM SEL2	OUT SEL3	OUT SEL4	AFM OUT SEL	AFM MUTE	AFM MODE	AFM MODE
TUNER MONO	AUTO	—	—	H	H	L	L	H	H	L	
	MIX			H	H	L	L	H	L	L	
	STD			L	L	L	L	H	L	L	
TUNER ST LINE ST	AUTO	—	STEREO	H	H	L	L	L	H	H	
	MIX	—		H	H	L	L	L	L	H	
	STD	—		L	L	L	L	L	L	H	
TUNER BIL LINE BIL	AUTO	MAIN+SUB	MAIN+SUB	H	H	L	L	L	H	M	
		MAIN	MAIN	H	L	L	L	H	H	M	
		SUB	SUB	L	H	L	L	M	H	M	
	MIX	MAIN+SUB	MAIN+SUB	H	H	L	L	L	L	M	
		MAIN	MAIN	H	L	L	L	H	L	M	
		SUB	SUB	L	H	L	L	M	L	M	
	STD	MAIN+SUB	MAIN+SUB	L	L	L	L	L	L	M	
		MAIN	MAIN	L	L	L	L	H	L	M	
		SUB	SUB	L	L	L	L	M	L	M	

• "ATM MUTE" is to be driven "H" when After Record (including After Record PAUSE) is selected.

• Disp HiFi is lit when STEREO/BILINGUAL is displayed. However, it is lit off when After Record (including PAUSE) is selected.

• Whether Playback or REC System is selected, the "AFM MIX" port is driven "H" when the Audio Monitor switch is placed in MIX. Otherwise, it is driven "L".

• EE System is followed in SHUTTLE EDIT mode.

• Each signal has the levels shown below.

AFM OUTSEL ...H=4.0V or more, M=2.0 to 2.7V, L=0.8V or less.

AFM MODE DET...H=3.4V to 4.75V, M=1.5 to 2.6V, L=0 to 0.8V.

AFM MODE ...H=4.0V or more, M=2.0 to 2.7V, L=0.8V or less.

• In MUTE mode,

OUTSEL1, 2="L", AFM MUTE="H"

3) INPUT SELECT CONTROL

MA-173 BOARD	LINE1	LINE2	LINE3	TUNER
INSEL1 (IC003③)	L	L	H	L
INSEL2 (IC003④)	L	H	L	L
INSEL3 (IC002⑤)	H	H	L	L

• H=4V or more, L=0.8V or less

SECTION 7 ADJUSTMENTS

<SERVICE MODE>

☆ This unit uses the EVR (Electronic Variable Resistor) for performing adjustments and tests. These functions are implemented by the SENSER LANC system.

1. SENSER LANC

SENSER LANC is the LANC format designed to perform EVR (electronic variable resistor) adjustments and various tests for this 8mm VTR by using the LANC (Control L). The SENSER LANC is synonymous with the old SERVICE LANC. But there have been enhancements and the SENSER LANC is now used as a unified word.

2. HOW TO USE THE RM-95 JIG (ADJUSTMENT REMOTE CONTROL)

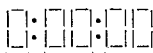
The RM-95 jig is used to operate the SENSER LANC. This jig will create the SENSER LANC Mode. Because of this, the HOLD switch has been modified for service purpose.

Note that the old models of the RM-95 have no page display function and it is needed to replace their microcomputers within these old models.

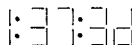
Old	μ PD7503G-A71-12	8-759-142-56	No Page display
	μ PD7503G-C23-12	8-759-146-77	(The microcomputer must be replaced.)
New	μ PD7503G-C56-12	8-759-148-35	Page display

LCD Display of RM-95

Example

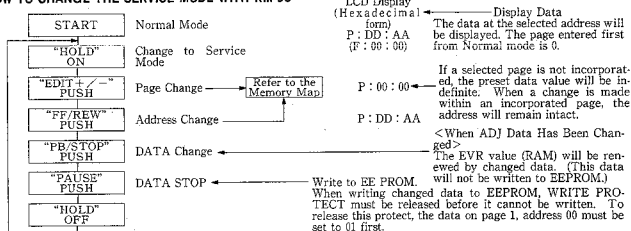


Page Data Address



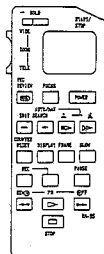
This means that the data on page 1, address 3D is 37.

3. HOW TO CHANGE THE SERVICE MODE WITH RM-95

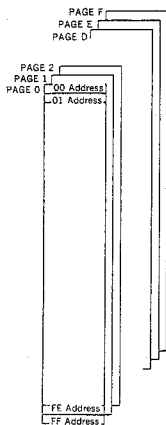


RM-95 (J-6082-053-B)

Command	Action	RM-95 Control Button Pushed
Page Up	Page+1	Edit Search +
Page Down	Page-1	Edit Search -
Address Up	Address+1	Fast Forward
Address Down	Address-1	Rewind
Data Up	Data+1	Play Back
Data Down	Data-1	Stop
Store	Writes data to EEPROM, RAM	Pause



4. SENSER LANC MEMORY MAP



This unit has pages 0 to F allocated as listed below.

PAGE	Page Allocation
0	
1	D Page Protect Release
2	
3	
4	
5	
6	F Page Protect Release
7	
8	
9	
A	
B	
C	
D	EEPROM on the MA Board
E	
F	EEP ROM on the FM Board

Note) There are 16 different pages from C to F available. These pages are allocated as listed above. In particular, address 00 on each page is called category. For example, "category 3 on page 2" means that data 03 is placed at address 00 on page 2.

5. EEPROM WRITE PROTECT

EEPROM Write Protect is released and established as follows:

Page 1	Address 00
--------	------------

Data	Function
00	Normal (Write Protected)
01	Write Protect Release

Note 1: EE-PROM on page D is located on the MA board.

Note 2: After completing necessary adjustments/repairs, be sure to return the data at this address to 00.

Note 3: No special adjustment (data write) is required for page F.

To release page F from protection, write 01 onto address 00 on page 6.

6. TEST MODE SETTING

Page 3	Address 01
--------	------------

Data	Function
01	<p>Track Shift Playback</p> <ul style="list-style-type: none"> • Automatic discrimination between SP and LP is also inhibited and REC SP/LP is followed. • Data at address 08 in category 2 should be changed if you want to change track shift amount.

Page B	Address 10
--------	------------

Data	Function
06	<p>Clock Adjustment</p> <ul style="list-style-type: none"> • When 2F is written to address 23 in category 0 in port check mode, BUZZER OUT will oscillate at 4096Hz.

7. EMERGENCY CODES

These codes can be used to check the condition of failure (abnormality) that occurred.

Page D	Address EC
--------	------------

First Emergency Code

...The code of the first failure that occurred.

Page D	Address E8
--------	------------

Second Emergency Code

...The code of the second failure that occurred.

Page D	Address E4
--------	------------

Last Emergency Code

...The code of the last failure that occurred (This data will be renewed each time a failure occurs).

Note 1: After completing necessary adjustments/repairs, be sure to rewrite the data address EC, E8 and E4 to 00.

Note 2: When writing data, after setting the data, be sure to press the PAUSE button on the adjustment remote control.

Code	Condition of Failure
00	No failure
10	Load Direction, Cam Encoder Failure
11	Unload Direction, Cam Encoder Failure
22	T Reel Rotational Failure
23	S Reel Rotational Failure
24	FG Failure at Start of T Reel
25	FG Failure at Start of S Reel
30	Failure at Start of Capstan
31	Failure During Stationary Operation of Capstan
40	FG Failure at Start of Drum
41	PG Failure at Start of Drum
42	FG Failure During Stationary Operation of Drum
60	FL Cassette Compartment Failure
70	DEW EJECT Failure

8. D PAGE MEMORY MAP

Note) When replacing EEPROM on the MA board, set data on page D as follows.

Address	Function	Initial Value	Memo Column
00		00	
01		00	
02			
03	Adjustment Mode	04	
04	Switching Position Adjustment (LOW)	Adjustment	
05	Switching Position Adjustment (HIGH)	Adjustment	
06			
07		7C	
08		56	
09		AD	
0A		39	
0B		39	
0C		39	
0D		39	
0E		FD	
0F		39	
10		21	
11		22	
12		10	
13	SP/LP Voltage Adjustment	Adjustment	
14			
15			
16			
17	Capstan Duty Adjustment	Adjustment	
18	PB VCO Adjustment	Adjustment	
19			
1A	FF VCO Adjustment	Adjustment	
1B	REW VCO Adjustment	Adjustment	
1C	High Speed FF VCO Adjustment	Adjustment	
1D	High Speed REW VCO Adjustment	Adjustment	
1E			
1F			
20			
21			
22			
23			
24			
25			
26			
27			
28		7C	
29		56	
2A		AD	
2B			
2C		7C	
2D		56	

Address	Function	Initial Value	Memo Column
2E		2D	
2F			
30-DF	Not used		
E0			
E1			
E2			
E3			
E4	Emergency Code (LAST)	00	
E5		00	
E6		00	
E7		00	
E8	Emergency Code (2nd)	00	
E9		00	
EA		00	
EB		00	
EC	Emergency Code (1st)	00	
ED		00	
EE		00	
EF		00	
F0			
F1			
F2			
F3			
F4			
F5			
F6			
F7			
F8			
F9			
FA			
FB			
FC			
FD			
FE			
FF			

7-1. MECHANICAL ADJUSTMENTS

For Mechanical Adjustments

For the procedures how to adjust and check the mechanism, as well as how to replace mechanical parts, refer to the separate 8mm Video Mechanical Adjustment Manual V (9-973-445-11).

However, for the procedures how to set the Track Shift mode, refer to the following text.

1-1. TAPE PASS ADJUSTMENT

[TRACK SHIFT]

The 8mm Video Tape Recorder system uses the AFT (Automatic Track Finding) function in which four different pilot signals are used for controlling the tape speed instantaneously to provide high precision tracking. This eliminates the Tracking Adjustment control, thus allowing accurate tracing.

In spite of its advantageous feature, the AFT system may have a difficulty in adjusting the tape pass system. The ATF will automatically corrects tracing even if the head has only a little tracing distortion. This may make it impossible to perform a complete adjustment.

Therefore, when performing a fine adjustment for tracking, the Track Shift mode should be entered before starting this adjustment. This mode will force to operate the ATF to shift the amount of tracking by a given quantity (approximately 1/4), so that tracking can be easily fine adjusted. Furthermore, no track shift jig is needed.

1-1-1. Setting the Track Shift Mode

- 1) Place the adjustment remote control RM-95 (J-6082-053-B) in the HOLD ON position.
- 2) Operate the EDIT +/- button to select adjustment page 3.
- 3) Operate the FF/REW button to select adjustment address 1.
- 4) Operate the PB/STOP button to set to adjustment data 1. (This will go to the Test Mode 3 (Pass Adjustment).)

Note 1 :For details of the Test Mode, refer to "SECTION 7. SERVICE MODE."

Note 2 :If the LP mode is recognized by the system wrongly, operate the Recording Time SP/LP button to enter the SP mode.

Note 3 :After adjustment, operate the PB/STOP button to reset to adjustment data 1. Place the remote control in the HOLD OFF position to return to the normal mode.

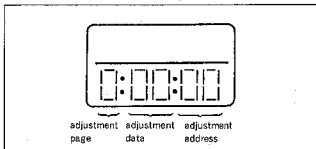


Fig. 7-1-1.

1-1-2. Preparation before Adjustment

- 1) Clean the surfaces over which tape moves past (of the tape guides, drum, capstan shaft and pinch rollers).
- 2) Oscilloscope Connection and Waveform Output:
1 ch: Drum head's RF signal output, RP-165 board CN001 pin ③ (PB Y)
External trigger input: RP-165 board CN001 pin ② (RF SWP)
GND: RP-165 board CN001 pin ① (GND)
- 3) Play back alignment tape for tracking (WR5-1CP).
- 4) Check that RF waveform observed on the oscilloscope is flat on both entrance and exit sides.
If not flat, perform necessary adjustment according to the separate 8 mm Video Mechanical Adjustment V.

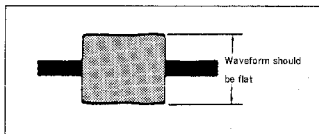


Fig. 7-1-2.

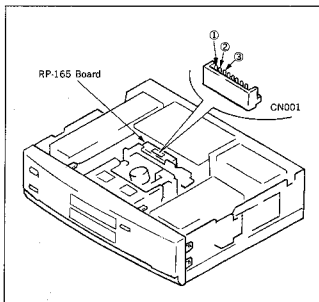


Fig. 7-1-3.

7-2. ELECTRICAL ADJUSTMENTS

See the adjusting part location diagram from on page 7-38 for the adjustment.

For details of the SENSER LANC, refer to "7 SERVICE MODE".

2-1. PREPARATION BEFORE ADJUSTMENT

2-1-1. Equipment Required

The measuring instruments used for this alignment include:

- 1) Monitor TV
- 2) Oscilloscope, dual-trace, bandwidth of 30MHz or more, with delay mode (A probe 10:1 should be used unless otherwise specified.)
- 3) Frequency counter
- 4) Pattern generator (with Video Output terminal; refer to Section 7-2-1. Equipment Connection.)
- 5) Digital voltmeter
- 6) Audio generator
- 7) Audio level meter
- 8) Audio distortion meter
- 9) Audio attenuator
- 10) Vector scope
- 11) Alignment tapes
 - For tracking adjustment (WR5-1CP)
Part No.: 8-967-995-07
 - For video frequency adjustment (WR5-7CE)
Part No.: 8-967-995-18
 - For L mode operation check
For SP (WR5-5CSP)
Part No.: 8-967-995-46
or (WR5-4CSP)
Part No.: 8-967-995-47
For LP (WR5-4CL)
Part No.: 8-967-995-56
 - For E mode operation check (ME tape)
For SP (WR5-8CSE)
Part No.: 8-967-995-48
For LP (WR5-8CLE)
Part No.: 8-967-995-57
 - For AFM stereo operation check (WR5-9CS)
Part No.: 8-967-995-28
- 12) Adjustment remote control (J-6082-053-B)

2-1-2. Equipment Connection

According to the specification of the input terminal (S VIDEO or VIDEO), connect required measuring instruments as shown in Fig. 7-2-1. and perform adjustment. The input terminal is specified in the parentheses () in the signal column. Unless otherwise specified, either terminal may be used. Note that the S VIDEO input terminal takes precedence. When performing adjustment with the VIDEO input terminal, pull out the connector from the S VIDEO input terminal.

Note 1 : When S VIDEO input is specified for a specific adjustment, if the adjustment is performed with VIDEO input, the product specifications for this unit may not be satisfied. The specified input must be always used.

Note 2 : If an adjustment is performed by using a VTR with S Video output terminal as a signal source, the performance of this unit will be affected by that VTR. A pattern generator with Y/C separation output terminal should be used wherever possible.

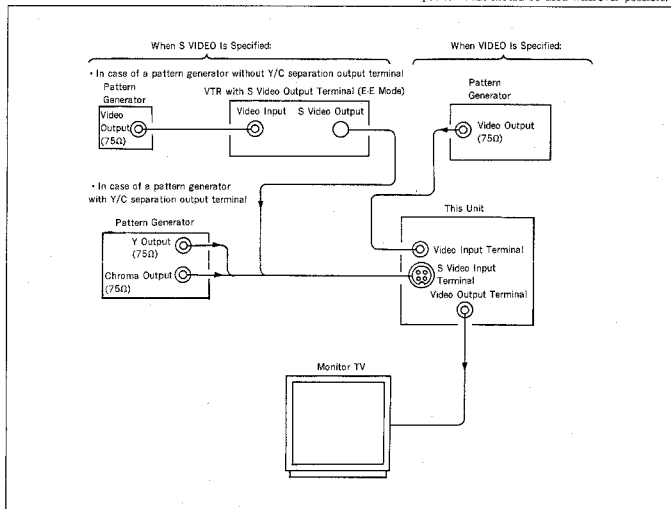


Fig. 7-2-1.

2-1-3. Input Signal Check

Video signal produced by a pattern generator is used as an adjustment signal to perform electrical alignment for this unit. This video signal must satisfy the specification.

1) S VIDEO Input

Connect an oscilloscope to the Y Signal terminal of the S Video Input terminal. Check that the synchronizing signal of the Y signal is approximately at 0.3Vp-p and that its video portion has an amplitude of approximately 0.7Vp-p. (When a VTR with S video output terminal is used, in addition to these checks, make sure that there are no residual chroma and burst signals.) Then, connect the scope to the Chroma signal terminal of the S Video Input terminal and check that the chroma signal has a burst signal amplitude of 0.3Vp-p and the burst signal waveform is flat. And check that the amplitude ratio of burst signal to chroma signal is 0.30 : 0.66. The Y and chroma signals used for electrical alignment are shown in Fig. 7-2-2.

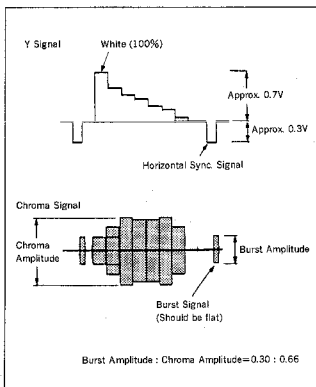


Fig. 7-2-2. Color Bar Signals of Pattern Generator

2) VIDEO Input

Connect an oscilloscope to the Video Input terminal. Check that the synchronizing signal of the Y signal has an amplitude of approximately 0.7V and that the burst signal has an amplitude of approximately 0.3V and its waveform is flat. And check that the level ratio of burst signal to "red" signal is 0.30 : 0.66. The video signal (color bar) used for electrical aligning this unit is shown in Fig. 7-2-3.

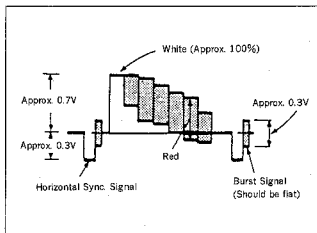


Fig. 7-2-3. Color Bar Signals of Pattern Generator

2-1-4. Alignment Tapes

The following alignment tapes are available.

The tape specified in the signal column for the adjustment to be performed should be used.

Note that if no tape code is specified for the adjustments in which alignment tapes for operation check are used, any tape for operation check may be used.

Alignment Tape	Record Mode	Tape Type	Tape Speed	Contents of Record		Applications
				Video Area	PCM Area	
Tracking WR5-1CP	L	MP	SP	CH2: 1MHz tape pass adjustment signal Switching position adjustment marker (CH1: 9MHz)		Tape pass adjustment Switching position adjustment
Video frequency characteristic WR5-7CE	E	ME	SP	RF sweep 0~15MHz Marker 2, 4.5, 7, 8.5, 10MHz		Frequency characteristic
Operation check WR5-4CSP or WR5-5CSP	L	MP	SP	<ul style="list-style-type: none"> Video signal Color bar 4 min. Monoscope 4 min. Audio signal (AFM) 400Hz 60% modulated 	<ul style="list-style-type: none"> Audio signal (PCM) Monoscope portion 20Hz 20sec. This cycle 400Hz 20sec. is repeated 14Hz 20sec. 4 times Color bar portion 1kHz, 4min. 	Operation check
WR5-8CSE	E	ME	SP		400Hz, 8min.	
WR5-4CL	L	MP	LP	<ul style="list-style-type: none"> Video signal Color bar 4 min. Monoscope 4 min. Audio signal (AFM) 400Hz 60% modulated 		
WR5-3CL	L	MP	LP			
WR5-8CLE	E	ME	LP		<ul style="list-style-type: none"> Audio signal (PCM) 400Hz 	
AFM stereo operation check WR5-9CS	L	MP	SP	<ul style="list-style-type: none"> Video signal Color bar 4 min. Monoscope 4 min. Audio signal (AFM) Stereo portion (color bar) Lch: 400Hz Rch: 1kHz (L+R 1.5MHz±60kHz DEV) (L-R 1.5MHz±30kHz DEV) Bilingual portion (monoscope) MAIN: 400Hz (1.5MHz±60kHz DEV) SUB: 1kHz (1.7MHz±30kHz DEV) 	<ul style="list-style-type: none"> Audio signal (PCM) 400Hz, 8 min. 	AFM stereo operation check

Note: Recording Mode

L Conventional mode

E Hi 8 (High Band) mode

Tape Type

MP Metal powder tape

ME Metal evaporated tape

The color bar signal recorded on these alignment tapes are shown in Fig. 7-2-4.

Note : This waveform is measured at the VIDEO OUT terminal (terminated at 75Ω).

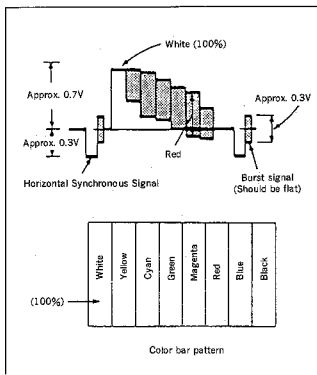


Fig. 7-2-4. Color Bar Signal of Alignment Tape

2-1-5. Input/Output Levels and Impedance

Antenna

75-ohm asymmetrical aerial socket

EURO-AV: LINE 1

21-pin

Video input : pin 20

Audio input : pins 2 and 6

Video/luminance output : pin 19

Chrominance output : pin 15

Audio output : pins 1 and 3

CANAL PLUS (EV-S9000E B/NP)

21-pin

PAY-TV (EV-S9000E VC)

Video input : pin 20

Audio input : pins 2 and 6

Video output : pin 19

Audio output : pins 1 and 3

LINE IN 2 and 3

S VIDEO IN (4-pin mini DIN) 1 each

Y : 1 Vp-p 75ohms

(unbalanced), sync negative

C : 0.3 Vp-p (colour burst) 75 ohms (unbalanced)

VIDEO IN (phono jack) 1 each

Input signal : 1 Vp-p, 75 ohms (unbalanced), sync negative

AUDIO IN (phono jack) (2 each)

Input level : -7.5 dBs

(0 db=0.775 Vrms)

Input impedance : more than 47 kilohms

LINE OUT

S VIDEO OUT (4-pin mini DIN)

Y : 1 Vp-p 75 ohms

(unbalanced), sync negative

C : 0.3 Vp-p (colour burst) 75 ohms (unbalanced)

VIDEO OUT (phono jack)

Output signal : 1 Vp-p, 75 ohms, (unbalanced), sync negative

AUDIO OUT (phono jack)

Standard output : -7.5 dBs at load impedance 47 kilohms

Output impedance : less than 10 kilohms

Microphone input

Minijack -60 dBs, for

low impedance

microphone

Headphone jack

Stereo minijack -26 dBs,

8 ohms

CONTROL S IN

Minijack

LANC

Stereo mini-minijack

2-2. POWER SUPPLY CHECK

2-2-1. Output Voltage Check (PS-316 Board)

Mode	E-E
Measurement instrument	Digital voltmeter
UN 13.5V check	
Measurement point	CN002 pin ①②, CN003 pin ⑤
Specified value	$13.5 \pm 1.5\text{Vdc}$
UN 5.8V check	
Measurement point	CN002 pin ⑤, CN003 pin ⑥⑦
Specified value	$6.0 \pm 0.2\text{Vdc}$
SW 5V check	
Measurement point	CN002 pin ⑥, CN003 pin ⑧
Specified value	$5.0 \pm 0.2\text{Vdc}$
UN -5V check	
Measurement point	CN003 pin ⑩
Specified value	$-5.0 \pm 0.2\text{Vdc}$
SW -5V check	
Measurement point	CN003 pin ⑪
Specified value	$-5.0 \pm 0.2\text{Vdc}$

[Check Method]

- Each of these supply voltages must meet its specified value.

2-3. SYSTEM CONTROL SYSTEM ADJUSTMENTS

2-3-1. Timer Clock Adjustment (FM-16 Board)

Mode	E-E
Signal	Arbitrary
Measurement point	IC101 pin ⑨ (BUZZER OUT)
Measuring instrument	Frequency counter
Adjustment element	CT001
Specified value	$4096.040 \pm 0.010\text{Hz}$

Note: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Adjustment Method]

- Place the adjustment remote control RM-95 (J-6082-053-B) in the HOLD ON position.
- Set address 00 on B page with data 01.
- Set address 10 on B page with data 06.
- Set address 00 on B page with data 00.
- Set address 23 on B page with data 2F.
- Use CT001 to adjust to $4096.040 \pm 0.010\text{Hz}$.
- After this adjustment, Push on the **[RESET]** key.

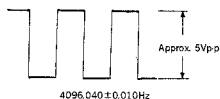


Fig. 7-2-5.

2-4. SERVO SYSTEM ADJUSTMENTS

[Adjustment sequence]

1. PWM Frequency Adjustment
2. Switching Position Adjustment
3. CAP Duty Adjustment
4. SP/LP Discrimination Check
5. SLOW Adjustment

2-4-1. PWM Frequency Adjustment (MA-173 Board)

Mode	Record
Signal	Arbitrary
Measurement point	IC302 pin ⑥
Measuring instrument	Frequency counter
Adjustment element	RV301
Specified value	$475 \pm 25\text{kHz}$

[Adjustment Method]

- 1) Set Recording Time to SP mode.
- 2) Use RV301 to adjust to $475 \pm 25\text{kHz}$.
- 3) Set Recording Time to LP mode.
- 4) Check for at $475 \pm 25\text{kHz}$.
- 5) If the specification is not met, repeat Steps 1) to 4).



Fig. 7-2-6.

2-4-2. Switching Position Adjustment

Mode	Playback
Signal	Alignment tape: For operation check (WR5-ICP)
Measurement point	CH-1: RP-165 board CN001 pin ② (RF SWP) CH-2: RP-165 board CN001 pin ⑤ (PB RF 2CH)
Measuring instrument	Oscilloscope
Adjustment page	D
Adjustment address	05 04
Specified value	$t = 0 \pm 5\mu\text{sec}$

[Adjustment Method]

- 1) Place the adjustment remote control RM-95 (J-6082-053-B) in the HOLD ON position.
- 2) Use EDIT +/- button to select adjustment page 1.
- 3) Use FF/REW button to select adjustment address 00.
- 4) Use PB/STOP button to set to adjustment data 01.
- 5) Press PAUSE button on the remote control to store the adjustment data.
- 6) Use EDIT +/- button to select adjustment page d.
- 7) Use FF/REW button to select adjustment address 05.
- 8) Operate PB/STOP button to change and set adjustment data so that $t = 0 \pm 255\mu\text{sec}$.
- 9) Press PAUSE button on the remote control to store the adjustment data.
- 10) Use FF/REW button to select adjustment address 04.
- 11) Use FF/REW button to change and set adjustment data so that $t = 0 \pm 5\mu\text{sec}$.
- 12) Press PAUSE button to store the adjustment data.

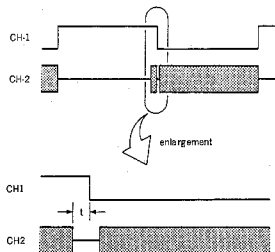


Fig. 7-2-7.

2-4-3. CAP Duty Adjustment

Mode	Record (LP mode)
Signal	Arbitrary
Measurement point	MA-173 board CN303 pin ④ (CAP FG) and pin ⑤ (CAP ERROR)
Measuring instrument	Oscilloscope
Adjustment page	D
Adjustment address	17
Specified value	$t_1 = t_2$

[Adjustment Method]

- 1) Place the adjustment remote control RM-95 (J-6082-053-B) in the HOLD ON position.
- 2) Set data at address 00 on page 1 to 01.
- 3) Change data at address 17 on page D and adjust so that $t_1 = t_2$ (50% duty).



Fig. 7-2-8.

- 4) At this time, check that the V1 at pin ⑤ level is minimum level.
- 5) Press PAUSE button to store the adjustment data.

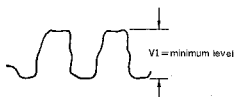


Fig. 7-2-9.

2-4-4. SP/LP Discrimination Check

(1) SP mode

Mode	Record (SP mode)
Signal	Arbitrary
Measurement point	MA-173 board CN303 pin ④ (SP/LP DET) and pin ⑤ (V REF)
Measuring instrument	Oscilloscope
Specified value	0.15Vp-p or more

[Check Method]

- 1) Connect CH1 of an oscilloscope with CN303 pin ④ and CH2 with CN303 pin ⑤.
- 2) Check the difference in voltage at between pin ④ and pin ⑤.
- 3) If the specification is not satisfied, with adjustment remote control RM-95 (J-6082-053-B), change data at address 13 on page D and adjust so that the difference falls into the specified range.

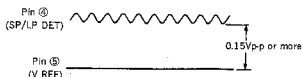


Fig. 7-2-10.

(2) LP mode

Mode	Record (LP mode)
Signal	Arbitrary
Measurement point	MA-173 board CN303 pin ④ (SP/LP DET) and pin ⑤ (V REF)
Measuring instrument	Oscilloscope
Specified value	0.35V _{p-p} or more

[Check Method]

- 1) Connect CH1 of an oscilloscope with CN303 pin ④ and CH2 with CN303 pin ⑤.
- 2) Check the difference in voltage at between pin ④ and pin ⑤.
- 3) If the specification is not satisfied, with adjustment remote control RM-95 (J-6082-053-B), change data at address 13 on page D and adjust so that the difference falls into the specified range.
- 4) After adjustment, perform the discrimination check in SP mode again.

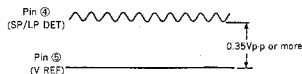


Fig. 7-2-11.

2-4-5. SLOW Adjustment

Mode	Self-record playback (SP and LP modes)
Signal	Color bar
Measurement point	CH-1: RP-165 board CN001 pin ② (RF SWP) CH-2: RP-165 board CN001 pin ③ (PB Y)
Measuring instrument	Oscilloscope
Adjustment page	D
Adjustment address	21 (SLOW TRACON DATA (LP)) 20 (SLOW TRACON DATA (SP)) 23 (—SLOW TRACON DATA (LP)) 22 (—SLOW TRACON DATA (SP))
Specified value	A=B

[Adjustment Method]

- 1) Record color bar signal in both SP and LP modes.
- 2) Play back the recorded signal.
- 3) Place the adjustment remote control in the HOLD ON position.
- 4) Use EDIT +/- button to select adjustment page D .
- 5) Use FF/REW button to select adjustment address 21 .
- 6) Enter LP mode and check that the record is played back.
- 7) Use the remote commander or the EDIT SHUTTLE SLOW on the set to enter SLOW 1/5 mode.
- 8) Operate PB/STOP button on the remote control RM-95 to change and set adjustment data so that A=B.
- 9) Press PAUSE button on the remote control to store the adjustment data.
- 10) In the same manner, select adjustment address 20 for SP Mode SLOW (1/5) mode, adjustment address 23 for LP Mode —SLOW (—1/5) mode, and address 22 for SP Mode —SLOW (—1/5) mode and adjust so that A=B.

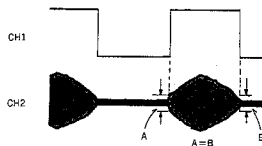


Fig. 7-2-12.

2-5. VIDEO SYSTEM ADJUSTMENTS

Color video signal supplied from a pattern generator is used as a video input signal for Video System Alignment in the Recording mode. This signal should be checked to ensure that it meets the specifications provided in Figs. 7-2-2 and 7-2-3 and "INPUT SIGNAL CHECK".

The adjustments in Video System Alignment should be performed in the following sequence.

[Adjustment sequence]

1. Playback Frequency Characteristic Adjustment
2. SYNC AGC Adjustment
3. Accel Y Level Adjustment
4. Accel C Level Adjustment
5. Chroma Comb Filter Adjustment
6. Pre-emphasis Input Level Adjustment
7. L Mode Y FM Carrier Frequency, Y FM Deviation Adjustment
8. E Mode Y FM Carrier Frequency, Y FM Deviation Adjustment
9. Chroma Emphasis Adjustment
10. L Mode De-emphasis Level Adjustment
11. L Mode Playback Level Adjustment
12. E Mode De-emphasis Level Adjustment
13. E Mode Playback Level Adjustment
14. Recording Chroma Level Pre Adjustment
15. Recording Y Level Adjustment
16. L Mode Recording Chroma Level Adjustment
17. E Mode Recording Chroma Level Adjustment
18. Y/Chroma Adjustment
19. Carrier Leak Adjustment

2-5-1. Playback Frequency Characteristic Adjustment (RP-165 Board)

Note: The designation () stands for adjustment on CH-2.

Mode	Playback
Signal	Alignment tape: for frequency characteristic adjustment (WR5-7CE)
Measurement point	CN001 pin ⑤ (PB RF 1CH) (CN001 pin ⑥ (PB RF 2CH)) External trigger: CN001 pin ② (RF SWP) Trigger slope: -[+]
Measuring instrument	Oscilloscope
Adjustment element	RV001 [RV002]
Specified value	4.5MHz level: 8.5MHz level=3 : (2±0.2)

[Adjustment Method]

- 1) Use RV001 [RV002] to adjust so that the ratio of 4.5MHz level to 8.5MHz of PB RF output waveform is 3 : (2±0.2).

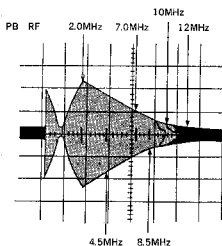


Fig. 7-2-13.

2-5-2. SYNC AGC Adjustment (VI-121 Board)

Mode	E-E
Signal	Color bar (S VIDEO)
Measurement point	CN101 pin ③ (DI Y (X))
Measuring instrument	Oscilloscope
Adjustment element	RV107
Specified value	$1.00 \pm 0.05 \text{ Vp-p}$

[Adjustment Method]

- 1) Use RV107 to adjust to $1.00 \pm 0.05 \text{ Vp-p}$.

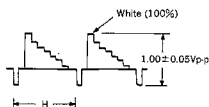


Fig. 7-2-14.

2-5-3. Accel Y Level Adjustment (VI-121 Board)

Mode	E-E
Signal	Color bar (VIDEO)
Measurement point	IC105 pin ② (VIN 1)
Measuring instrument	Oscilloscope
Adjustment element	RV601
Specified value	$0.50 \pm 0.02 \text{ Vp-p}$

[Adjustment Method]

- 1) Use RV601 to adjust to $0.50 \pm 0.02 \text{ Vp-p}$.

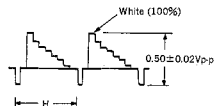


Fig. 7-2-15.

2-5-4. Accel C Level Adjustment (VI-121 Board)

Mode	E-E
Signal	Color bar (VIDEO)
Measurement point	CN101 pin ⑥ (VI C (X))
Measuring instrument	Oscilloscope
Adjustment element	RV602
Specified value	$120 \pm 10 \text{ mVp-p}$

[Adjustment Method]

- 1) Use RV602 to adjust to $120 \pm 10 \text{ mVp-p}$.

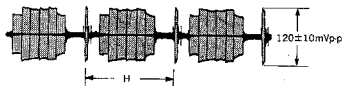


Fig. 7-2-16.

2-5-5. Chroma Comb Filter Adjustment (VI-121 Board)

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-5CSP)
Measurement point	Line Video out terminal
Measuring instrument	Vectorscope
Adjustment element	RV112 (GAIN) RV103 (PHASE)
Specified value	No difference on the scope screen when [EDIT] key is turned ON/OFF.

[Adjustment Method]

- 1) Connect a vector scope to the line output video terminal.
- 2) Playback alignment tape.
- 3) Adjust RV112 and RV103 so that there is no difference on the scope screen when [EDIT] key is turned ON/OFF.

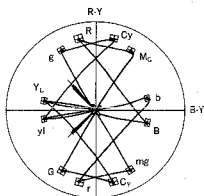


Fig. 7-2-17.

2-5-6. Pre-emphasis Input Level Adjustment (VI-121 Board)

Mode	E-E
Signal	Color bar (S VIDEO)
Measurement point	IC105 pin ⑤
Measuring instrument	Oscilloscope
Adjustment element	RV106
Specified value	$0.50 \pm 0.02V_{p-p}$

[Adjustment Method]

- 1) Use RV106 and adjust to $0.50 \pm 0.02V_{p-p}$.

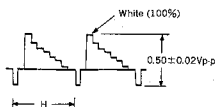


Fig. 7-2-18.

2-5-7. L Mode Y FM Carrier Frequency, Y FM Deviation Adjustment

Note 1: After this adjustment, be sure to perform "2-5-8. E Mode Y FM Carrier Frequency, Y FM Deviation Adjustment".

Note 2: The S Video Line output terminal should be terminated at 75Ω.

- (1) L Mode Y FM Carrier Frequency Adjustment (VI-121 Board)

Mode	E-E
Signal	No signal (select Line in)
Measurement point	IC105 pin ⑤ (Y RF OUT)
Measuring instrument	Frequency counter Oscilloscope
Adjustment element	RV111
Specified value	$4.38 \pm 0.05MHz$

Note: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Adjustment Method]

- 1) Insert MP type cassette tape.
- 2) Use RV111 to adjust to $4.38 \pm 0.05\text{MHz}$.



$4.38 \pm 0.05\text{MHz}$

Fig. 7-2-19.

(2) L Mode Y FM Deviation Adjustment (VI-121 Board)

Mode	Record and playback
Signal	Color bar (S VIDEO)
Measurement point	S Video Line Output, Y Signal terminal
Measuring instrument	Oscilloscope
Adjustment element	RV110
Specified value	Playback level should be at $1.00 \pm 0.05\text{Vp-p}$.

[Adjustment Method]

- 1) Insert MP type cassette tape.
- 2) Record color bar signal.
- 3) Play back the recorded signal.
- 4) Check the playback output level.
Specification: $1.00 \pm 0.05\text{Vp-p}$
- 5) If the specification is not met, rotate RV110 as directed below and then repeat Steps 1) to 4).

	Direction of Rotating RV110
Over specified value	Counterclockwise (\curvearrowright)
Below specified value	Clockwise (\curvearrowleft)

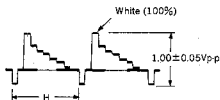


Fig. 7-2-20.

2-5-8. E Mode Y FM Carrier Frequency, Y FM Deviation Adjustment

Note 1: When performing this adjustment, it is a prerequisite that "2-5-7. L Mode FM Carrier Frequency, Y FM Deviation Adjustment" has been completed.

Note 2: The S Video Line output terminal should be terminated at 75Ω .

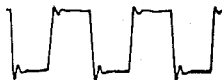
(1) E Mode Y FM Carrier Frequency Adjustment (VI-121 Board)

Mode	E-E
Signal	No signal (select Line in)
Measurement point	IC105 pin ⑤ (Y RF OUT)
Measuring instrument	Frequency counter Oscilloscope
Adjustment element	RV109
Specified value	$5.96 \pm 0.05\text{MHz}$

Note: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Adjustment Method]

- 1) Insert ME type cassette tape.
- 2) Use RV109 to adjust to $5.96 \pm 0.05\text{MHz}$.



$5.96 \pm 0.05\text{MHz}$

Fig. 7-2-21.

(2) E Mode Y FM Deviation Adjustment (VI-121 Board)

Mode	Record and playback
Signal	Color bar (S VIDEO)
Measurement point	S Video Line Output, Y Signal terminal
Measuring instrument	Oscilloscope
Adjustment element	RV108
Specified value	Playback level should be at $1.00 \pm 0.05 \text{ Vp-p}$.

[Adjustment Method]

- 1) Insert ME type cassette tape.
- 2) Record color bar signal.
- 3) Play back the recorded signal.
- 4) Check the playback output level.
Specification: $1.00 \pm 0.05 \text{ Vp-p}$
- 5) If the specification is not met, rotate RV108 as directed below and then repeat Steps 1) to 4).

	Direction of Rotating RV108
Over specified value	Counterclockwise (\odot)
Below specified value	Clockwise (\ominus)



Fig. 7-2-22.

2-5-9. Chroma Emphasis Adjustment (VI-121 Board)

Mode	E-E
Signal	Color bar
Measurement point	IC105 pin ⑧ (B.EMPH ⑧)
Measuring instrument	Oscilloscope
Adjustment element	RV113
Specified value	f0 component should be reduced to a minimum.

[Adjustment Method]

- 1) Adjust RV113 to allow the latter half of the yellow component in the chroma signal to have a minimum amplitude.

Allow the latter half of the yellow component to have a minimum amplitude.



Fig. 7-2-23.

2-5-10. L Mode De-emphasis Level Adjustment (VI-121 Board)

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-5CSP)
Measurement point	IC105 pin ⑩ (Y CCD OUT)
Measuring instrument	Oscilloscope
Adjustment element	RV102
Specified value	$0.50 \pm 0.05 \text{ Vp-p}$

[Adjustment Method]

- 1) Use RV102 to adjust to $0.50 \pm 0.05 \text{ Vp-p}$.



Fig. 7-2-24.

2-5-11. L Mode Playback Level Adjustment (VI-121 Board)

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-5CSP)
Measurement point	CN101 pin ⑧ (DI Y (X))
Measuring instrument	Oscilloscope
Adjustment element	RV105
Specified value	$1.00 \pm 0.01 \text{ Vp-p}$

[Adjustment Method]

- 1) Use RV105 to adjust to $1.00 \pm 0.01 \text{ Vp-p}$.



Fig. 7-2-25.

2-5-12. E Mode De-emphasis Level Adjustment (VI-121 Board)

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-8CSE)
Measurement point	IC105 pin ⑩ (Y CCD OUT)
Measuring instrument	Oscilloscope
Adjustment element	RV101
Specified value	$0.50 \pm 0.05 \text{ Vp-p}$

[Adjustment Method]

- 1) Use RV101 to adjust to $0.50 \pm 0.05 \text{ Vp-p}$.



Fig. 7-2-26.

2-5-13. E Mode Playback Level Adjustment (VI-121 Board)

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-8CSE)
Measurement point	CN101 pin ⑧ (DI Y (X))
Measuring instrument	Oscilloscope
Adjustment element	RV104
Specified value	$1.00 \pm 0.01 \text{ Vp-p}$

[Adjustment Method]

- 1) Use RV104 to adjust to $1.00 \pm 0.01 \text{ Vp-p}$.

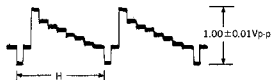


Fig. 7-2-27.

2-5-14. Recording Chroma Level Pre Adjustment (VI-121 Board)

Mode	E-E
Signal	Color bar
Measurement point	Q701 (Emitter)
Measuring instrument	Oscilloscope
Adjustment element	RV705
Specified value	$140 \pm 10 \text{ mVp-p}$

[Adjustment Method]

- 1) Insert ME type cassette tape.
- 2) Use RV705 to adjust to $140 \pm 10 \text{ mVp-p}$.

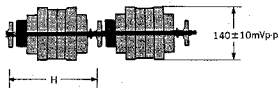


Fig. 7-2-28.

2-5-15. Recording Y Level Adjustment (VI-121 Board)

Mode	E-E
Signal	No signal (select Line in)
Measurement point	CN105 pin ⑩ (REC Y/C (X))
Measuring instrument	Oscilloscope (20MHz bandwidth)
Adjustment element	RV701
Specified value	$650 \pm 10 \text{mVp-p}$

Note: Set an oscilloscope to 20MHz bandwidth.

[Adjustment Method]

- 1) Insert ME tape.
- 2) Use RV701 to adjust to $650 \pm 10 \text{mVp-p}$.



Fig. 7-2-29.

2-5-16. L Mode Recording Chroma Level Adjustment (VI-121 Board)

Mode	E-E
Signal	Color bar
Measurement point	CN105 pin ⑩ (REC RF)
Measuring instrument	Oscilloscope
Adjustment element	RV702
Specified value	$90 \pm 10 \text{mVp-p}$

[Adjustment Method]

- 1) Connect between emitter and collector (+B) of Q716.
- 2) Insert MP type cassette tape.
- 3) Adjust RV702 so that the flat portion of the chroma signal red component has the level $90 \pm 10 \text{mVp-p}$.
- 4) After this adjustment, remove to connect.

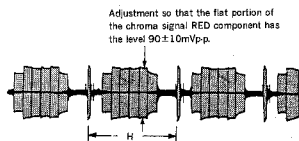


Fig. 7-2-30.

2-5-17. E Mode Recording Chroma Level Adjustment (VI-121 Board)

Mode	Record
Signal	Color bar
Measurement point	CN105 pin ⑩ (REC RF)
Measuring instrument	Oscilloscope
Adjustment element	RV703
Specified value	$140 \pm 10 \text{mVp-p}$

[Adjustment Method]

- 1) Connect between emitter and collector (+B) of Q716.
- 2) Insert ME type cassette tape.
- 3) Record color bar signal.
- 4) Adjust RV703 so that the flat portion of the chroma signal red component has the level $140 \pm 10 \text{mVp-p}$.
- 5) After this adjustment, remove to connect.

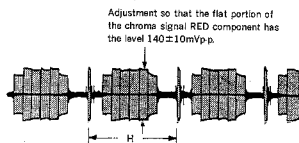


Fig. 7-2-31.

2-5-18. Y/Chroma Adjustment (WC-10 Board)

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-5CSP)
Measurement point	Y Signal: CN002 pin ⑬ C Signal: CN002 pin ⑭
Measuring instrument	Oscilloscope
Adjustment element	RV003
Specified value	$0 \pm 50 \text{ nS}$

[Adjustment Method]

- 1) Connect CH1 of an oscilloscope with CN002 pin ⑬ and CH2 with CN002 pin ⑭.
- 2) Match waveform on CH1 with waveform on CH2, and use RV003 to adjust so that Y coincides with C at point a.

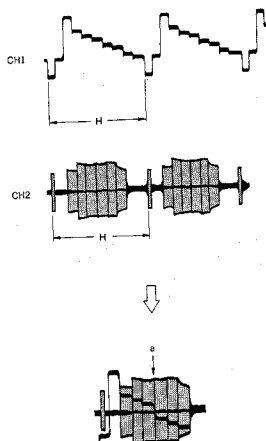


Fig. 7-2-32.

2-5-19. Carrier Leak Adjustment (WC-10 Board)

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-5CSP)
Measurement point	Video Line Output terminal
Measuring instrument	Vector scope
Adjustment element	RV001 RV002
specified value	Adjust the carrier to the center.

[Adjustment Method]

- 1) Use RV001 and RV002 to adjust so that the carrier is in the center of the scope.

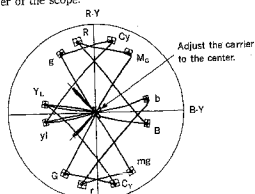


Fig. 7-2-33.

2-6. SECAM-PAL CONVERSION SYSTEM ADJUSTMENTS

- Make this adjustment aligning the PAL video system.
- For this adjustment, use the equipment listed below.

2-6-1. Equipment Required

- (1) PAL colour Monitor TV
- (2) Oscilloscope, Dual-trace, Bandwidth ... more than 30MHz with delay mode
- (3) SECAM colour-bar generator
- (4) PAL vector scope
- (5) Frequency counter
- (6) Digital voltmeter

2-6-2. Setting up during adjustment

Video signals output by a pattern generator are used as adjustment signals when making the electrical adjustments, and these video output signals should be within the required standard. Connect an oscilloscope to the Video input terminal. Check that the amplitudes of video signal SYNC signals, picture portions, and line ID signals are flat at approximately 0.3, 0.7, and 0.3V, respectively. Fig. 7-2-34. shows video signals (colour bars) used in making the electrical adjustment.

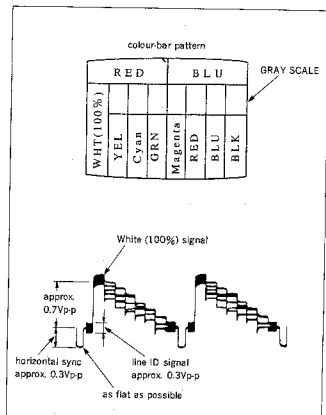


Fig. 7-2-34.

[Adjustment sequence]

1. Bell Filter Adjustment
2. VCO Adjustment
3. I REF Adjustment
4. B-Y fo Adjustment
5. R-Y fo Adjustment
6. Color level Adjustmont

2-6-3. Bell Filter Adjustment (TC-30 Board)

Mode	E-E
Signal	SECAM color bar
Measurement point	IC003 pin ② (CL022)
Measuring instrument	Oscilloscope
Adjustment element	LV001
Specified value	20mVp-p or less

[Adjustment Method]

- 1) Use LV001 to adjust to 20mVp-p or less.

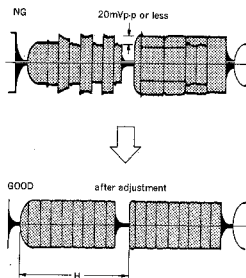


Fig. 7-2-35.

2-6-4 VCO Adjustment (TC-30 Board)

Mode	E-E
Signal	SECAM color bar
Measurement point	IC003 pin ⑨ (HD OUT) (CL026)
Measuring instrument	Oscilloscope Frequency counter
Adjustment element	RV001
Specified value	$15.625 \pm 0.01 \text{ kHz}$

[Connection]

- 1) Connect between pin ⑨ and pin ⑩ of IC003 with a jumper wire.

[Adjustment Method]

- 1) Use RV001 to adjust to $15.625 \pm 0.01 \text{ kHz}$.
- 2) After this adjustment, open the shorted pin.

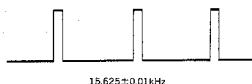


Fig. 7-2-36.

2-6-5. I REF Adjustment (TC-30 Board)

Mode	E-E
Signal	SECAM color bar
Measurement point	IC003 pin ⑨ (HD OUT) (CL026) CN001 pin ④ (VI Y)
Measuring instrument	Oscilloscope
Adjustment element	RV002
Specified value	$4.5 \pm 0.1 \mu \text{ sec}$

[Adjustment Method]

- 1) Use RV002 to adjust to $4.5 \pm 0.1 \mu \text{ sec}$.

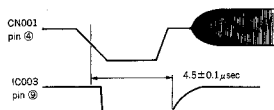


Fig. 7-2-37.

2-6-6. B—Y to Adjustment (TC-30 Board)

Mode	E-E
Signal	SECAM color bar
Measurement point	IC004 pin ③ (B—Y) (CL032)
Measuring instrument	Oscilloscope
Adjustment element	LV003
Specified value	0.05Vp-p or less

[Connection]

- 1) Connect between pin ③ and pin ④ of IC003 with a jumper wire.

[Adjustment Method]

- 1) Use LV003 to adjust to 0.05Vp-p or less.
(Set a blank level by the black level.)
- 2) After this adjustment, open the shorted pin.

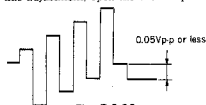


Fig. 7-2-38.

2-6-7. R—Y to Adjustment (TC-30 Board)

Mode	E-E
Signal	SECAM color bar
Measurement point	IC004 pin ② (R—Y) (CL033)
Measuring instrument	Oscilloscope
Adjustment element	LV002
Specified value	0.05Vp-p or less

[Connection]

- 1) Connect between pin ② and pin ③ of IC003 with a jumper wire.

[Adjustment Method]

- 1) Use LV002 to adjust to 0.05Vp-p or less.
(Set a blank level by the black level.)
- 2) After this adjustment, open the shorted pin.

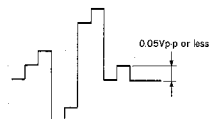


Fig. 7-2-39.

2-6-8. Color Level Adjustment (TC-30 Board)

Mode	E-E
Signal	SECAM color bar
Measurement point	IC004 pin ③ (B-Y) (CL032)
Measuring instrument	Oscilloscope
Adjustment element	RV003
Specified value	$750 \pm 50 \text{ mVp-p}$

[Connection]

- 1) Connect between pin ③ and pin ④ of IC003 with a jumper wire.

[Adjustment Method]

- 1) Use RV003 to adjust to $750 \pm 50 \text{ mVp-p}$.
- 2) After this adjustment, open the shorted pin.

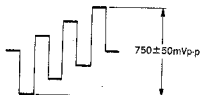


Fig. 7-2-40.

2-7. DIGITAL SYSTEM ADJUSTMENTS

The adjustments provided in Digital System Adjustments should be performed in the following sequence.

[Adjustment sequence]

1. AFC Adjustment
2. APC Adjustment
3. Read Clock (YRCK) Adjustment
4. Read Clock (CRCK) Adjustment
5. Y Output Level Adjustment

2-7-1. AFC Adjustment (DI-51 Board)

Mode	Playback
Signal	Alignment tape: For operation check (WR5-5CSP or WR5-8CSE)
Measurement point	IC800 pin ⑩ (YWCK) (CL820 or CL821)
Measuring instrument	Frequency counter
Adjustment element	CV800
Specified value	$14218.750 \pm 50 \text{ kHz}$

Note: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Connection]

- 1) Connect between pin ⑤ (VSIN) and pin ④ (VDD) of IC800 by inserting $10 \text{ k}\Omega$ (1-249-429-11). (This will make AFC free running.)
- 2) Short between pin ⑩ (PWM) and pin ⑪ (PEO) of IC800.

[Adjustment Method]

- 1) Use CV800 to adjust to $14218.750 \pm 50 \text{ kHz}$.
- 2) After this adjustment, perform the following check.

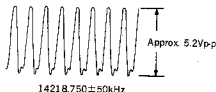


Fig. 7-2-41.

[Connection]

- 1) Remove the resistor inserted between pin ⑤ (VSIN) and pin ④ (VDD) of IC800. (This will enter the AFC mode.)
- 2) Open between pin ⑩ (PWM) and pin ⑪ (PEO) of IC800.
- 3) Check the waveform at the following measuring points.

●(RPD) Waveform Check

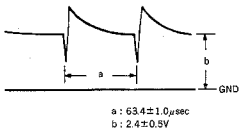
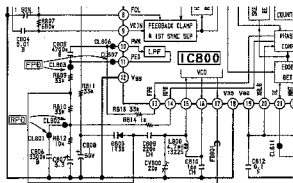


Fig. 7-2-42.

●(FPD) Waveform Check

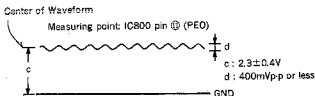


Fig. 7-2-43.

●(AFH) Waveform Check

Measuring point : CH-1 IC800 pin ② (AFH)
CH-2 CN100 pin ④ (VI Y (X))

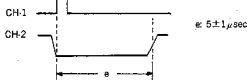


Fig. 7-2-44.

2-7-2. APC Adjustment (DI-51 Board)

Mode	Playback
Signal	Alignment tape: For operation check (WR5-5CSP or WR5-8CSE)
Measurement point	IC300 pin ③ (CWCK)
Measuring instrument	Frequency counter
Adjustment element	CV300
Specified value	$14734475 \pm 50 \text{Hz}$

Note: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Connection]

- 1) Open pin ② (VI C (X)) of CN100.
- 2) Connect between CL252 (Q253 (E)) and GND by inserting $0.01 \mu\text{F}$ capacitor (1-102-129-11).

[Adjustment Method]

- 1) Use CV300 to adjust to $14734475 \pm 50 \text{Hz}$.
- 2) After this adjustment, perform the following check.



Fig. 7-2-45.

[Connection]

- 1) Remove the capacitor inserted between CL252 (Q253 (E)) and GND.
- 2) Connect pin ② (VI C (X)) of CN100. (This will enter the APC mode.)
- 3) Check the waveform at pin ③ of IC300.

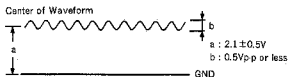
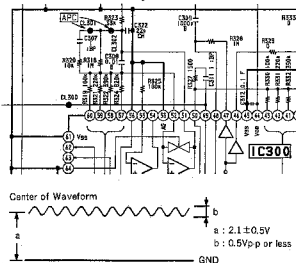


Fig. 7-2-46.

2-7-3. Read Clock (YRCK) Adjustment (DI-51 Board)

Mode	Playback
Signal	Alignment tape: For operation check (WR5-5CSP or WR5-8CSE)
Measurement point	IC500 pin ① (YWCK) (CL504 or CL505)
Measuring instrument	Frequency counter
Adjustment element	CV500
Specified value	14218750 \pm 200Hz

Note: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Adjustment Method]

- 1) Use CV500 to adjust to 14218750 \pm 200Hz.

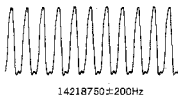


Fig. 7-2-47.

2-7-4. Read Clock (CRCK) Adjustment (DI-51 Board)

Mode	Playback
Signal	Alignment tape: For operation check (WR5-5CSP or WR5-8 CSE)
Measurement point	IC600 pin ⑥ (CRCK) (CL600 or CL601)
Measuring instrument	Frequency counter
Adjustment element	CV600
Specified value	17734475 \pm 100Hz

Note: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Adjustment Method]

- 1) Use CV600 to adjust to 17734475 \pm 100Hz.

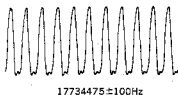


Fig. 7-2-48.

2-7-5. Y Output Level Adjustment (DI-51 Board)

Note: For this Adjustment, the sequence of adjustments (1) and (2) should be performed twice.

- (1) D/A Amplifier Gain Adjustment

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-5CSP or WR5-8CSE)
Measurement point	CN100 pin ④ (DI Y)
Measuring instrument	Oscilloscope
Adjustment element	RV700
Specified value	240 \pm 10mV

[Adjustment Method]

- 1) Adjust RV700 so that the center of the pedestal level is 240 \pm 10mV above from the center of the sync tip level.



Fig. 7-2-49.

(2) A/D Amplifier Gain Adjustment

Mode	Playback
Signal	Alignment tape: For operation check, color bar portion (WR5-5CSP or WR5-8CSE)
Measurement point	CN100 pin ⑪ (DI Y)
Measuring instrument	Oscilloscope
Adjustment element	RV200
Specified value	$760 \pm 10 \text{ mV}$

[Adjustment Method]

- 1) Adjust RV200 so that the center of the pedestal level is $760 \pm 10 \text{ mV}$ above from the center of sync tip level.

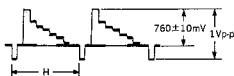


Fig. 7-2-50.

2-8. CHARACTER GENERATOR SYSTEM CHECK

2-8-1. CG OSC CHECK (MA-173 Board)

Mode	Record
Signal	Arbitrary
Measurement point	IC705 pin ⑤ (EXD)
Measuring instrument	Frequency counter
Specified value	$6.85 \pm 0.05 \text{ MHz}$

Note: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[CHECK Method]

- 1) Check to $6.85 \pm 0.05 \text{ MHz}$.



Fig. 7-2-51.

2-9. PCM AUDIO SYSTEM ADJUSTMENTS

Color bar signal should be used as Video signal input for performing this adjustment.

[Connection of Equipment for Audio Measurement]

In addition to equipment for video measurement, equipment for audio system measurement should be connected as illustrated below.

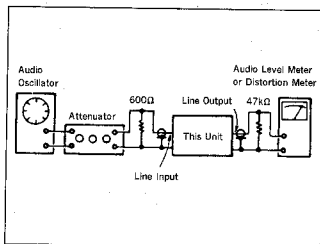


Fig. 7-2-52.

Unless otherwise specified, place the switches and controls of this unit in the following positions:

- Input Select switch LINE 3
 - Audio Monitor (PCM/MIX/STD) switch PCM
- The adjustments should be performed in the following sequence.

[Adjustment sequence]

1. Master Clock Adjustment
2. Recording Level Adjustment
3. Offset Adjustment
4. Playback VCO Check
5. Playback Level Adjustment
6. E-E Output Level Check
7. Overall Frequency Characteristic Check
8. Overall Distortion Factor Check
9. Overall Noise Level Check

2-9-1. Master Clock Adjustment (PC-61 Board)

Mode	Record
Signal	Arbitrary
Measurement point	IC703 pin ⑩ (MCK 1)
Measuring instrument	Frequency counter
Adjustment element	CV701
Specified value	$11.50 \pm 0.05\text{MHz}$

Note 1: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Connection]

- 1) Short between pin ⑩ (TST 4) and pin ⑩ (A VDD) of IC703.
- 2) Short between pin ⑩ (TST 0) and pin ⑩ (VSS) of IC703.
- 3) Short between pin ⑩ (LPF Y) and pin ⑩ (LPF X) of IC703.

[Adjustment Method]

- 1) Use CV701 to adjust to $11.50 \pm 0.05\text{MHz}$.

Note 2: After this adjustment, open the shorted pins.

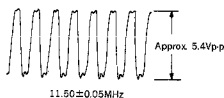


Fig. 7-2-53.

2-9-2. Recording Level Adjustment (PC-61 Board)

Mode	Record
Signal	400Hz, -7.5dBs
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Adjustment element	RV703
Specified value	Left side: $-7.5 \pm 0.5\text{dBs}$ Right side: $\pm 1.5\text{dBs}$ with respect to left side level

[Adjustment Method]

- 1) Adjust RV703 so that the left side level is at $-7.5 \pm 0.5\text{dBs}$.
- 2) At this time, check that the right level is within $\pm 1.5\text{dBs}$ of the left side level.

2-9-3. Offset Adjustment (PC-61 Board)

Mode	Self-record playback
Signal	400Hz, +3dBs
Measurement point	Left side: IC701 pin ② Right side: IC701 pin ⑩
Measuring instrument	Oscilloscope
Adjustment element	Left side: RV701 Right side: RV702
Specified value	Top and bottom clips observed on waveform should be equal with each other.

[Adjustment Method]

- 1) Record signal.
- 2) Play back the recorded portion.
- 3) Check that the clip at the top is equal with the clip at the bottom of the waveform observed.
- 4) If not equal, rotate the RV701 on the left side and RV702 on the right side as directed below. Then, repeat Steps 1) to 3) to check for the clip.

	Direction of Rotating RV701 or RV702
Top clip less	Counterclockwise (\curvearrowleft)
Top clip more	Clockwise (\curvearrowright)

Note: In this adjustment, the left and right sides will be affected by each other. Alternately adjust the left and right sides.

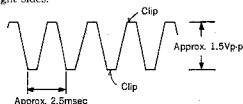


Fig. 7-2-54.

2-9-4. Playback VCO Check (PC-61 Board)

Mode	Playback, Fast Forward Search, Rewind Search
Signal	Arbitrary tape (Tape which does not contain PCM signal.)
Measurement point	CN703 pin ② (PB VCO)
Measuring instrument	Frequency counter
Specified value	Playback : 11.50 ± 0.05 MHz Fast Forward Search: 11.59 ± 0.05 MHz Rewind Search : 12.20 ± 0.05 MHz FF : 11.98 ± 0.05 MHz REW : 12.20 ± 0.05 MHz

Note 1: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Connection]

- 1) Connect pin ① (TEST) of CN703 to 5V.

[Adjustment Method]

- 1) Use the remote commander to enter the Playback mode.
- 2) Check to 11.50 ± 0.05 MHz.
- 3) Use the remote commander to execute Fast Forward Search. (Press SERACH on "Fast Forward" side.)
- 4) Check to 11.59 ± 0.05 MHz.
- 5) Use the remote commander to execute Rewind Search. (Press SERACH on "Rewind" side.)
- 6) Check to 12.20 ± 0.05 MHz.
- 7) Use the remote commander to enter the FF mode.
- 8) Check to 11.98 ± 0.05 MHz.
- 9) Use the remote commander to enter the REW mode.
- 10) Check to 12.20 ± 0.05 MHz.

Note 2: After this adjustment, open pin ① of CN703.



During Playback	: 11.50 ± 0.05 MHz
During Fast Forward Search	: 11.59 ± 0.05 MHz
During Rewind Search	: 12.20 ± 0.05 MHz
During FF	: 11.98 ± 0.05 MHz
During REW	: 12.20 ± 0.05 MHz

Fig. 7-2-55.

2-9-5. Playback Level Adjustment (PC-61 Board)

Mode	Playback
Signal	Alignment tape: For operation check, 400Hz portion (WR5-9CS)
Measurement point	Audio Line Output terminal, left and right
Measuring instrument	Audio level meter
Adjustment element	RV705
Specified value	Left side: $-7.5 \pm 0.3\text{dB}$ Right side: $\pm 1.5\text{dB}$ with respect to left side level

[Adjustment Method]

- 1) Adjust RV705 so that the left side level is at $-7.5 \pm 0.3\text{dB}$.
- 2) At this time, check that the right level is within $\pm 1.5\text{dB}$ of the left side level.

2-9-6. E-E Output Level Check

Mode	E-E
Signal	400Hz, -7.5dB
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Specified value	$-7.5 \pm 3\text{dB}$

[Check Method]

- 1) Place the Recording Level control in [5] position.
- 2) Check that the indicated value of a peak level meter is -3 to $+3\text{dB}$.
- 3) Check that the respective levels of Audio Line Output terminals, left and right are $-7.5 \pm 3\text{dB}$.

2-9-7. Overall Frequency Characteristic Adjustment

Mode	Self-record playback
Signal	Ⓐ 400Hz, -7.5dB Ⓑ 20Hz, -7.5dB Ⓒ 14kHz, -7.5dB : Audio Line Input terminals, left and right
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Specified value	The playback output levels of 20Hz and 14kHz should be $0 \pm 3\text{dB}$ with 400Hz playback output level at 0dB .

[Check Method]

- 1) Record signals Ⓐ to Ⓒ in turn.
- 2) Play back the recorded portion.
- 3) Check that the respective playback output levels of 20Hz and 14kHz are $0 \pm 3\text{dB}$ with 400Hz playback output level at 0dB .

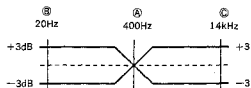


Fig. 7-2-56.

2-9-8. Overall Distortion Factor Check

Mode	Self-record playback
Signal	400Hz, -7.5dB : Audio Line Input terminals, left and right
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Distortion meter
Specified value	0.35% or less

[Check Method]

- 1) Record signal.
- 2) Play back the recorded portion.
- 3) Check that the distortion factor is 0.35% or less.

2-9-9. Overall Noise Level Check

Mode	Self-record playback
Signal	No signal (insert a shorting plug into the Audio Line Input jacks, left and right.)
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Specified value	-82dBs or less Note

[Check Method]

- 1) Record.
- 2) Play back recorded portion.
- 3) Check that the noise level is -82dBs or less.

Note: This is a value when an IHF-A weighing filter is used.

2-10. AFM AUDIO SYSTEM ADJUSTMENTS

Color bar signal should be used as Video signal input for performing this adjustment.

[Connection of Equipment for Audio Measurement]

In addition to equipment for video measurement, the audio measurement equipment should be connected as illustrated below.

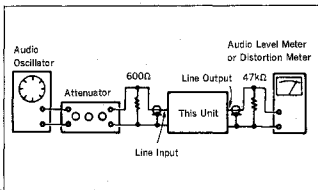


Fig. 7-2-57.

Unless otherwise specified, place the switches and controls of this unit in the following positions:

- Input Select switch LINE 3
- Audio Monitor (PCM/MIX/STD) switch STD

The adjustments should be performed in the following sequence.

[Adjustment sequence]

1. Carrier Frequency 1.5MHz Check
2. Carrier Frequency 1.7MHz Check
3. 1.5MHz Deviation Adjustment
4. 1.7MHz Deviation Adjustment
5. Playback Separation 2 Adjustment
6. Playback Separation 1 Adjustment
7. E-E Output Level Check
8. Overall Frequency Characteristic Check
9. Overall Distortion Factor Check
10. Overall Noise Check

2-10-1. Carrier Frequency 1.5MHz Check (MA-173 Board)

Mode	Record
Signal	No signal
Measurement point	IC501 pin ⑧ (VCO OUT)
Measuring instrument	Frequency counter
Specified value	$1500 \pm 3\text{kHz}$

Note 1: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Check Method]

- 1) Check to $1500 \pm 3\text{kHz}$.

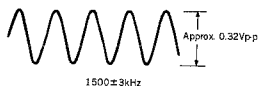


Fig. 7-2-58.

2-10-2. Carrier Frequency 1.7MHz Check (MA-173 Board)

Mode	Record
Signal	No signal
Measurement point	IC501 pin ⑧ (VCO OUT)
Measuring instrument	Frequency counter
Specified value	$1700 \pm 3\text{kHz}$

Note 1: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Check Method]

- 1) Check to $1700 \pm 3\text{kHz}$.

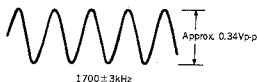


Fig. 7-2-59.

2-10-3. 1.5MHz Deviation Adjustment (MA-173 Board)

Mode	Playback
Signal	Alignment tape: For operation check (WR5-9CS)
Measurement point	Audio Line Output terminal, left
Measuring instrument	Audio level meter
Adjustment element	RV501
Specified value	$-7.5 \pm 0.5\text{dB}$

[Adjustment Method]

- 1) Use RV501 to adjust to $-7.5 \pm 0.5\text{dB}$.

2-10-4. 1.7MHz Deviation Adjustment (MA-173 Board)

Mode	Playback
Signal	Alignment tape: For operation check (WR5-9CS)
Measurement point	Audio Line Output terminal, right
Measuring instrument	Audio level meter
Adjustment element	RV502
Specified value	$-7.5 \pm 0.5\text{dB}$

[Adjustment Method]

- 1) Use RV502 to adjust to $-7.5 \pm 0.5\text{dB}$.

2-10-5. Playback Separation 2 Check (MA-173 Board)

Mode	Playback
Signal	Alignment tape: For operation check, stereo portion (WR5-9CS)
Measurement point	Audio Line Output terminal, right
Measuring instrument	Oscilloscope
Specified value	400Hz component minimum (no distortion should be present on 1kHz waveform.)

[Check Method]

- 1) Check that 400Hz component on the right level is at minimum.

2-10-6. Playback Separation 1 Check (MA-173 Board)

Mode	Playback
Signal	Alignment tape: For operation check, stereo portion (WR5-9CS)
Measurement point	Audio Line Output terminal, left
Measuring instrument	Oscilloscope
Specified value	1kHz component minimum (no distortion should be present on 400Hz waveform.)

[Check Method]

- 1) Check that 1kHz component on the left level is at minimum.

2-10-7. E-E Output Level Check

Mode	E-E
Signal	400Hz, -7.5dBs
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Specified value	$-7.5 \pm 3\text{dBs}$

[Check Method]

- 1) Check that the indicated value of a peak level meter is -3 to $+3\text{dBs}$.
- 2) Check that the respective levels of Audio Line Output terminals, left and right are $-7.5 \pm 3\text{dBs}$.

2-10-8. Overall Frequency Characteristic Check

Mode	Self-record playback
Signal	Ⓐ 400Hz, -17.5dBs Ⓑ 20Hz, -17.5dBs Ⓒ 14kHz, -17.5dBs : Audio Line Input terminals, left and right
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Specified value	The playback output level is 0dB at 400Hz, check that it is $-3 \pm 3\text{dB}$ at 20Hz and $0 \pm 3\text{dB}$ at 14kHz.

[Check Method]

- 1) Record signals Ⓐ to Ⓒ in turn.
- 2) Play back the recorded portion.
- 3) When the playback output level is 0dB at 400Hz, check that it is $-3 \pm 3\text{dB}$ at 20Hz and $0 \pm 3\text{dB}$ at 14kHz.

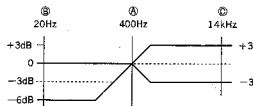


Fig. 7-2-60.

2-10-9. Overall Distortion Factor Check

Mode	Self-record playback (Bilingual mode)
Signal	400Hz, -7.5dB: Audio Line Input terminals, left and right
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Distortion meter
Specified value	Left side: 1.0% or less <i>Note</i> Right side: 1.5% or less <i>Note</i>

[Check Method]

- 1) Record signal.
- 2) Play back the recorded portion.
- 3) Check that the distortion factor is 1.0% or less on the left side and 1.5% or less on the right side *Note*.

Note: These are values when a 200Hz - 6kHz BPF is used.



Fig. 7-2-61.

2-10-10. Overall Noise Level Check

Mode	Self-record playback
Signal	No signal (Insert a shorting plug into the Audio Line Input jacks, left and right.)
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Audio level meter
Specified value	Left side: -68dB or less <i>Note</i> Right side: -68dB or less <i>Note</i>

[Check Method]

- 1) Record.
- 2) Play back recorded portion.
- 3) Check that the noise level is -68dB or less on the left side and -68dB on the right side.

Note: These are values when an IHF-A weighing filter is used.

2-11. TUNER SYSTEM ADJUSTMENTS

This adjustment should be made in the VHF/UHF Broadcasting Listening mode.

The adjustments should be made in the following sequence.

[Adjustment sequence]

1. 30V Voltage Check
2. AGC Adjustment
3. Separation Adjustment

2-11-1. 30V Voltage Check (TU-145 Board)

Signal	Arbitrary
Measurement point	Q901 (Emitter)
Measuring instrument	Digital voltmeter
Specified value	31.3±1.5V

[Check Method]

- 1) Check to 31.3±1.5V

2-11-2. AGC Adjustment (TU-145 Board)

Mode	E-E
Signal	TV signal (62dBμ)
Measurement point	IF001 pin ①
Measuring instrument	Digital voltmeter
Adjustment element	AGC VR (IF901)
Specified value	6±0.5V

[Adjustment Method]

- 1) Use AGC VR to adjust the voltage value to 6±0.5V.
- 2) When the TV signal input is changed from 58dB to 62dB, check that the voltage at TU902 pin ② changes from less than 6.0V to 6.0V or more.

2-11-3. Separation Adjustment (TU-145 Board)

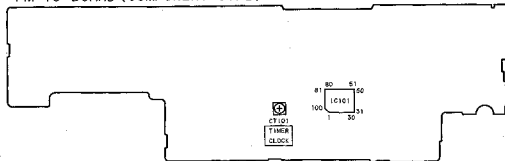
Signal	Stereo L CH: 400Hz, 100% modulated R CH: No modulation
Measurement point	Audio Line Output terminals, left and right
Measuring instrument	Oscilloscope
Adjustment element	RV901

[Adjustment Method]

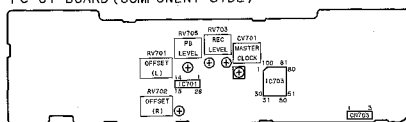
- 1) Set a sound multiplex signal generator to Stereo mode.
Set L CH to 400Hz, 100% modulated.
- 2) Connect an oscilloscope to the R channel of Audio Line Output.
- 3) Adjust RV901 so that R CH output is minimized. In this adjustment, Do not rotate RV901 fully.

2-12. ADJUSTING PARTS LOCATION DIAGRAM

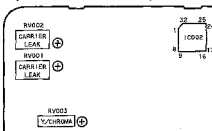
FM-16 BOARD (COMPONENT SIDE)



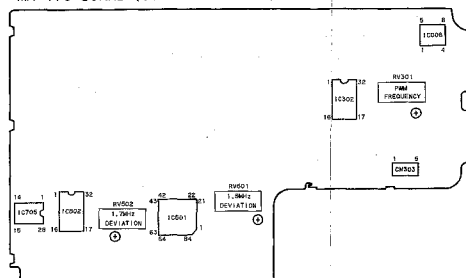
PC-61 BOARD (COMPONENT SIDE)



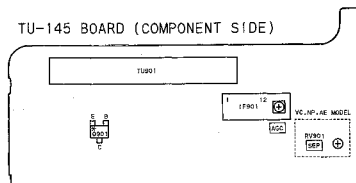
WC-10 BOARD (COMPONENT SIDE)



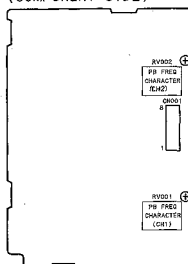
MA-173 BOARD (COMPONENT SIDE)



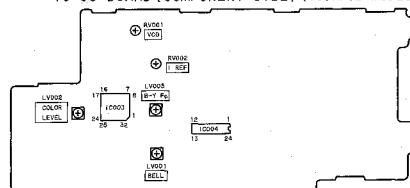
TU-145 BOARD (COMPONENT SIDE)



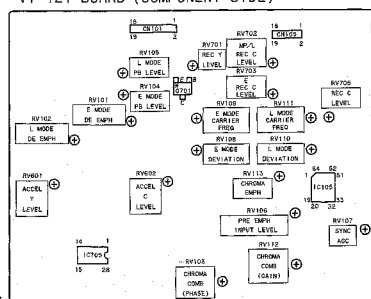
RP-165 BOARD (COMPONENT SIDE)



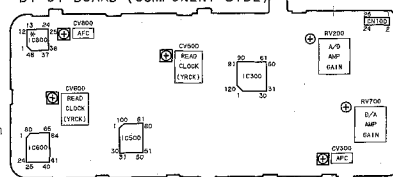
TC-30 BOARD (COMPONENT SIDE) (VC.NP.B MODEL)



VI-121 BOARD (COMPONENT SIDE)



D1-51 BOARD (COMPONENT SIDE)



EV-S9000E AE/B/E/NP/UB/VC

RMT-138B

SONY SERVICE MANUAL

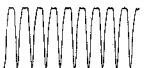
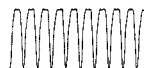
UK(UB) Model
German(VC) Model
Italian(AE) Model
North European(NP) Model
French(B) Model
Singapore(E) Model

CORRECTION-1

Correct your service manual as shown below.

Page 7-27 2-7-2. APC Adjustment (DI-51 Board)

Corrected portion

INCORRECTION	CORRECTION								
2-7-2. APC Adjustment (DI-51 Board)	2-7-2. APC Adjustment (DI-51 Board)								
<table border="1"> <tr> <td>Adjustment element</td><td>CV300</td></tr> <tr> <td>Specified value</td><td>14734475 ± 50Hz</td></tr> </table>	Adjustment element	CV300	Specified value	14734475 ± 50Hz	<table border="1"> <tr> <td>Adjustment element</td><td>CV300</td></tr> <tr> <td>Specified value</td><td>17734475 ± 50Hz</td></tr> </table>	Adjustment element	CV300	Specified value	17734475 ± 50Hz
Adjustment element	CV300								
Specified value	14734475 ± 50Hz								
Adjustment element	CV300								
Specified value	17734475 ± 50Hz								
<p>Note : A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.</p>	<p>Note : A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.</p>								
<p>[Connection]</p>	<p>[Connection]</p>								
<p>1) Open pin ② (VI C (X)) of CN100. 2) Connect between CL252 (Q253 (E)) and GND by inserting 0.01μF capacitor (1-102-129-11).</p>	<p>1) Open pin ② (VI C (X)) of CN100. 2) Connect between CL252 (Q253 (E)) and GND by inserting 0.01μF capacitor (1-102-129-11).</p>								
<p>[Adjustment Method]</p>	<p>[Adjustment Method]</p>								
<p>1) Use CV300 to adjust to 14734475 ± 50Hz. 2) After this adjustment, perform the following check.</p>	<p>1) Use CV300 to adjust to 17734475 ± 50Hz. 2) After this adjustment, perform the following check.</p>								
 <p>14734475 ± 50Hz</p> <p>Fig. 7-2-45.</p>	 <p>17734475 ± 50Hz</p> <p>Fig. 7-2-45.</p>								

EV-S9000E AE/B/E/NP/UB/VC

RMT-138B

SONY SERVICE MANUAL

UK(UB) Model
German(VC) Model
Italian(AE) Model
North European(NP) Model
French(B) Model
Singapore(E) Model

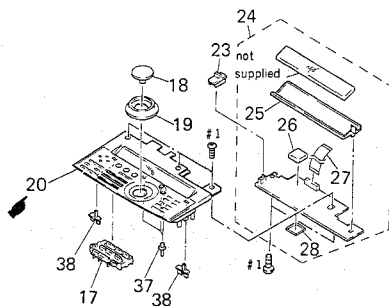
CORRECTION-2

Correct your service manual as shown below.

○ Page 5-2 5-1-1. CABINET AND FRONT PANEL ASSEMBLIES

■ : Corrected portion

INCORRECTION			CORRECTION		
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
20	X-3944-100-1	HOUSING ASSY (VC)	20	1-467-362-31	SWITCH BLOCK, CONTROL (VC)
20	X-3943-814-1	HOUSING ASSY(NP, AE, UB, B, E)	20	1-467-362-41	SWITCH BLOCK, CONTROL (NP, AE, UB, B, E)



Sony Corporation
Consumer A & V Products Company
Home A & V Products Div.

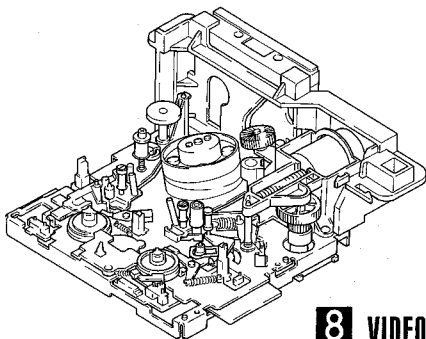
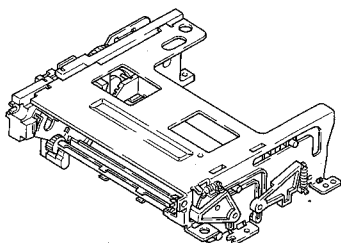
English
94L0470-1

8 mm Video MECHANICAL ADJUSTMENT MANUAL V

F MECHANISM

Video 8

File with the SERVICE MANUAL



8 VIDEO RECORDER
SONY®

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1. MAIN FEATURES

The mechanism developed exclusively for the 8mm video provides the following features.

1. Faster rewind time than U mechanism.
4 times high speed. (about 1 minute in case of P120 cassette.)
2. Jog shuttle supporting by addition of forced swing mechanism.
3. High speed start on Picture mechanism.
Stop → playback about 0.8 sec.
4. Head clogging prevention by adoption of new cleaning roller.
5. Reduction of the number of parts. (about 40 parts less than U mechanism.)
6. FL capstan motor drive.

2. PREPARATION FOR MECHANICAL CHECK, ADJUSTMENT AND REPLACEMENT

For removal of the cabinet and boards, refer to "Disassembly" in each Service Manual.

Mechanical adjustment is done in the **[EJECT]** mode. (To select the **[EJECT]** mode, refer to "2-3, Handling of Mode Selector II".)

2-1. FL CASSETTE COMPARTMENT ASSEMBLY (Fig. 1)

1. Removal

- 1) Select the **[EJECT]** mode.
- 2) Remove three screws ① and remove the FL cassette compartment ② toward the arrow.

2. Mounting

- 1) Select the **[EJECT]** mode.
- 2) Mount the FL cassette compartment ② with its tab ③ engaged with the hole ④ in mechanical chassis.
- 3) Tighten three screws ①.

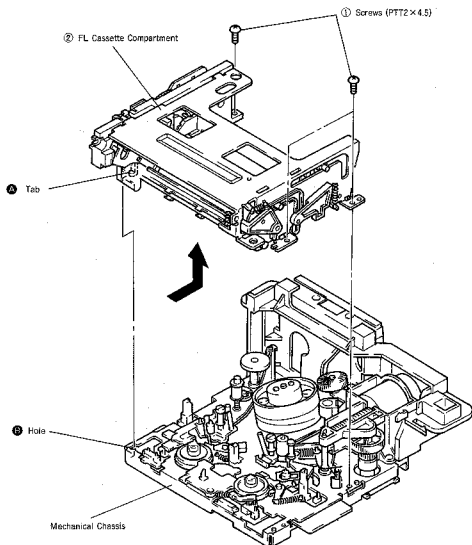


Fig. 1

**2-2. OPERATION WITH FL CASSETTE
COMPARTMENT ASSEMBLY REMOVED (Fig. 2)**

2-2-1. Activating Loading

- 1) Referring to the Service Guide, supply the power with the cabinet removed.
- 2) Cover the LED ① with an opaque cap ②.
- 3) Press the cassette down switch ③ three times.

2-2-2. Activating Play Status

- 1) Perform each step in 2-2-1. Activating Loading.
- 2) Press the PLAY button while keeping the cassette down switch pressed.

2-2-3. Activating Ejection

- 1) Press the EJECT button.

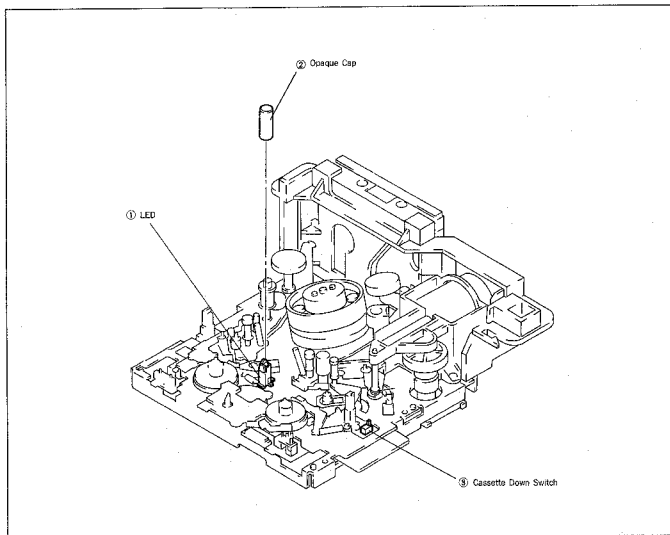


Fig. 2

2-3. HANDLING OF MODE SELECTOR II

2-3-1. General

The mode selector is used as a mechanism drive tool to help maintenance of various mechanical decks, and it provides the following functions.

1. MANUAL test

In this mode, the motor is driven only during the time that the switch is pressed, so that the operator can control the motor freely.

2. STEP test

In this mode, the motor is driven from the present status attained from sensor until the status changes to another status, so that the operator can confirm every operations.

3. AUTO test

This mode checks if the mechanism operates normally following the status change table registered to each mechanical deck through a sequence of operation in all statuses of the mechanism. If it detects a faulty status change during operation, it displays "NG" and stops operation.

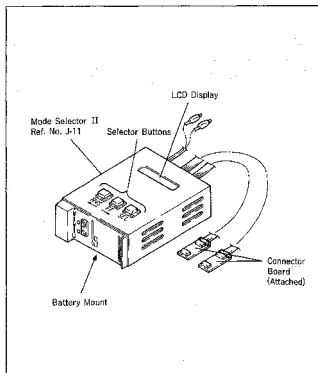


Fig. 3

MODE SELECTOR II (J-6082-282-A) CONNECTION

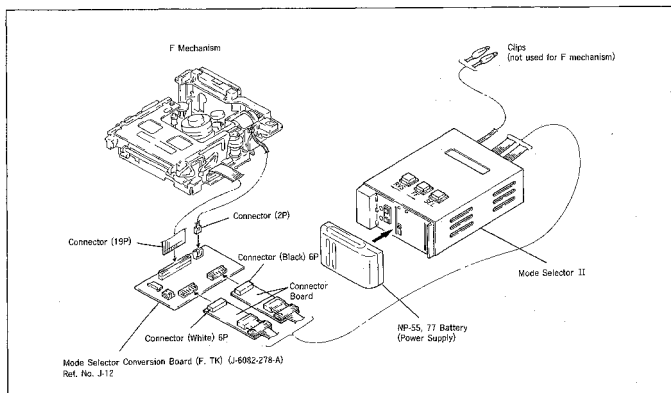
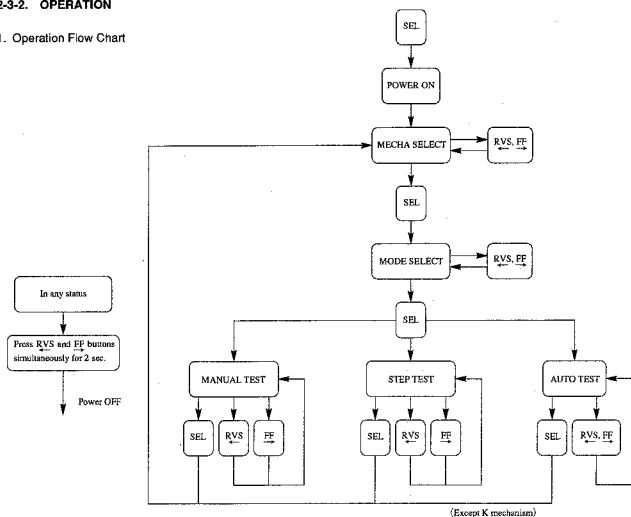


Fig. 4

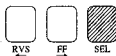
2-3-2. OPERATION

1. Operation Flow Chart



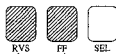
2. Mode Selector II power ON

Press the SEL button to turn on the power supply.



3. Mode Selector II power OFF

At the power ON, press RVS and FF buttons simultaneously for more than 2 seconds to turn off the power supply.



4. Mechanism selection

The "MECHA SELECT" is displayed on LCD immediately after the power supply is turned on. Call the desired mechanism by pressing the RVS or FF button, and press the SEL button. Thus, the mechanism has been selected. (Fig. 5-1 indicates F mechanism.)

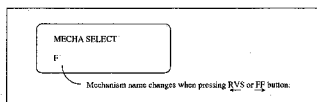


Fig. 5-1

5. Mode selection

Select the test mode "MANUAL", "STEP" or "AUTO" to be executed.

Call the desired mode by pressing the \overleftarrow{RVS} or \overrightarrow{FF} button, and press the SEL button. Thus, the mode has been selected.

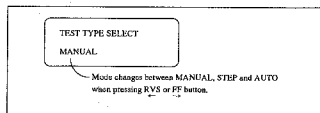


Fig. 5-2

6. MANUAL test

This mode drives the motor only during the time that the \overleftarrow{RVS} or \overrightarrow{FF} button is pressed.

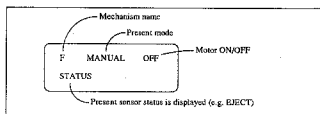


Fig. 5-3

7. STEP test

This mode drives the motor from the present status until the status changes in the direction selected with \overleftarrow{RVS} or \overrightarrow{FF} button.

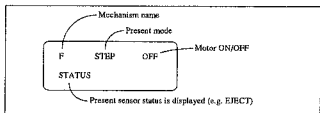


Fig. 5-4

8. AUTO test

This mode checks if the operation sequence stored for each mechanical deck is normal, and if the signals from sensors that execute a sequence of operation meet the stored sequence. The same operation is executed if either \overleftarrow{RVS} or \overrightarrow{FF} is pressed.

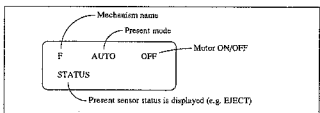


Fig. 5-5

Mechanism status (position) change sequence

After selection of mechanism, if either MANUAL or STEP mode is selected and the \overleftarrow{RVS} or \overrightarrow{FF} button is pressed, the mechanism status (position) can be designated. (Designated status is displayed at STATUS position.)

EJECT \longleftrightarrow UNLOAD END \longleftrightarrow STOP 1 \longleftrightarrow HIGH SPEED REW \longleftrightarrow DEW \longleftrightarrow LOAD END \longleftrightarrow STOP 2 \longleftrightarrow FWD. P \longleftrightarrow RVS. P

MD name					F mechanism
Code	A	B	C	D	
0	1	1	1	1	EJECT
0	0	1	1	2	UNLOAD END
1	0	1	0	3	STOP 1
1	0	1	1	4	HIGH SPEED REW
1	0	0	0	5	DEW
1	1	0	0	6	
0	1	1	0	7	LOAD END
0	1	1	0	8	STOP 2
0	1	0	0	9	
1	1	0	1	10	FWD. P/FWD
0	0	0	1	11	RVS. P/RVS
1	0	0	1	12	

9. Battery alarm display

In case of low voltage of battery, which is a power supply of Mode Selector, the alarm message is displayed (not synchronous display).

In such a case, no operation is available, requiring battery replacement.

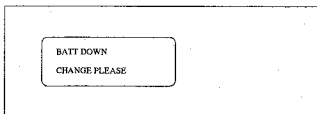


Fig. 5-6

3. PERIODIC CHECK AND MAINTENANCE

- Carry out the following maintenance and periodic checks in order not only to fully exhibit the functions and performance of the set, but also for the equipment and tape. After repairing, service the set as follows, regardless of the length of use.

3-1. CLEANING OF ROTARY DRUM ASSEMBLY

- 1) Gently apply chamois cloth (Ref. No. J-2) soaked in cleaning liquid (Ref. No. J-1) to the rotary drum assembly. Clean it by rotating the upper rotary drum assembly slowly counterclockwise by hand.

Note : Do not rotate the motor by power or rotate the upper rotary drum assembly clockwise by hand. Also, the head tip is highly likely to be damaged if the chamois cloth is moved in a perpendicular direction to the it. make sure to follow the instructions above for cleaning the rotarydrum assembly.

3-2. CLEANING OF TAPE PATH (Fig.6)

- 1) In the **EJECT** mode, clean the tape running system (TG1, 2, 3, 4, 5, 6, 7, pinch roller, and capstan shaft) and the lower drum, using a super fine applicator (Ref. No. J - 3) soaked in the cleaning liquid.

Note : Note that no oil or grease of each link mechanism adheres to the super fine applicator (Ref. No. J - 3).

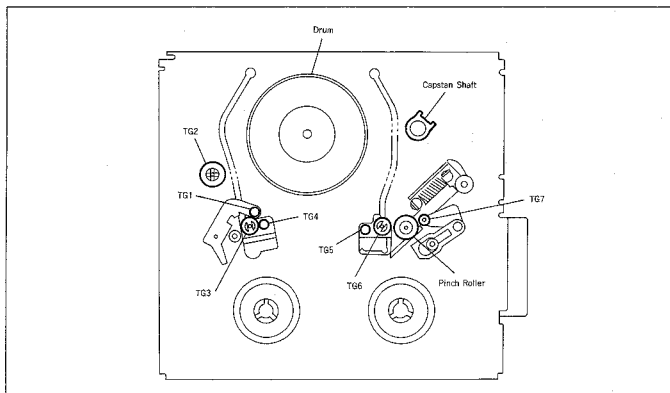


Fig. 6

3-3. PERIODIC CHECK ITEMS

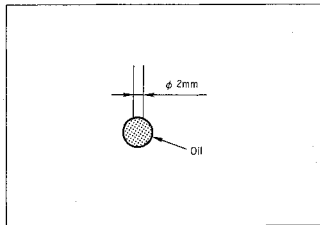
Location of Maintenance and check		Hours of Use (H)										Remarks
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000	
Tape transport System	Cleaning of tape path surface	○	○	○	○	○	○	○	○	○	○	Be careful of oil
	Cleaning and degaussing of rotary assembly	○	○	○	○	○	○	○	○	○	○	Be careful of oil
Driving System	Timing belt	-	☆	-	☆	-	☆	-	☆	-	☆	3-953-986-01
	Timing belt (FL)	-	☆	-	☆	-	☆	-	☆	-	☆	3-954-079-01
	Capstan shaft	-	⊙	-	⊙	-	⊙	-	⊙	-	⊙	Be absolutely careful not to get oil on the tape path surface.
	Relay pulley shaft	-	⊙	-	⊙	-	⊙	-	⊙	-	⊙	
	Loading motor	-	☆	-	☆	-	☆	-	☆	-	☆	X-3942-946-1
Performance Confirmation	Abnormal noise	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Back tension measurement	-	☆	-	☆	-	☆	-	☆	-	☆	
	Brake system	-	☆	-	☆	-	☆	-	☆	-	☆	
	FWD, RVS torque measurement	-	☆	-	☆	-	☆	-	☆	-	☆	

○ : Cleaning ⊙ : Oil ☆ : Confirmation

Note : When overhauling, refer to the items above to replace parts.

Note : Concerning oil

- Be sure to use specified oil. (If you use oil with different viscosity, etc., it may cause troubles.)
Oil : Part No. 7-661-018-18 (Mitsubishi Diamond Oil Hydrofluid NT-68)
- When lubricating bearings, be sure use oil free from dust, etc. (If you use oil with dust, etc. contained, it may cause bearings to be worn out or seized.)
- A drip of oil refers to an amount attached to the tip of a ϕ 2mm stick shown in the right figure.





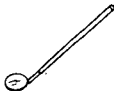
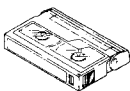
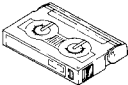



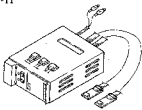
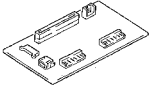



3-4. SERVICE JIGS LIST

Ref. No.	Name	Part No.	Fixture No.	Usage and Others
J-1	Cleaning fluid	Y-2031-001-0		
J-2	Chamois cloth	2-034-697-00		
J-3	Super fine applicator (Made by NIPPON APPLICATOR, P752D)			
J-4	Head degausser	Widely available		
J-5	Small mirror for adjustment Spare mirror	J-6080-029-A J-6080-030-1	SL-5052	Tape path
J-6	Alignment tape NTSC (WR5-1NP) PAL (WR5-1CP)	8-967-995-02 8-967-995-07		Tape path
J-7	FWD and RVS winding torque cassette	J-6080-824-A	GD-2086	
J-8	Rotary drum jig	(Attached to the maintenance rotary upper drum)		
J-9	Screwdriver for tape path	J-6082-026-A		For tape guide adjustment
J-10	Adjusting remote controller (Modified RM-95)	J-6082-053-B		Tape path (Setting of PATH mode)
J-11	Mode selector II	J-6082-282-A		For all models
J-12	Mode selector conversion board (F, TK)	J-6082-278-A		
J-13	FWD B.T. adjusting driver chip	J-6082-187-A		

Other equipment: • Oscilloscope

• Analog tester (20 kΩ)

J-1 	J-2 	J-3 	J-4 
J-5 	J-6 	J-7 	J-8  (Attached to the maintenance rotary upper drum)
J-9 	J-10 	J-11 	J-12 
J-13 			

4. MECHANICAL CHECK, ADJUSTMENT AND REPLACEMENT

Note : Use the Mode selector II (Ref. No. J-11) for the following mechanical checks, adjustments and replacements.

Note : The modes in are those set by pressing the Mode selector buttons.

4-1. RP BLOCK (Fig.7)

1. Removal

- 1) Remove a screw ①.
- 2) Disconnect the connector ②.
- 3) Disengage claws ④ at two places and remove the RP block ③.
- 4) Remove a screw ④, then the RP frame ⑤ in arrow direction.

2. Mounting

- 1) Mount the RP frame with its slot ⑥ engaged with the chassis ⑦.
- 2) Tighten a screw ④.
- 3) Mount the RP block ③ and tighten a screw ①.
- 4) Connect the connector ②.

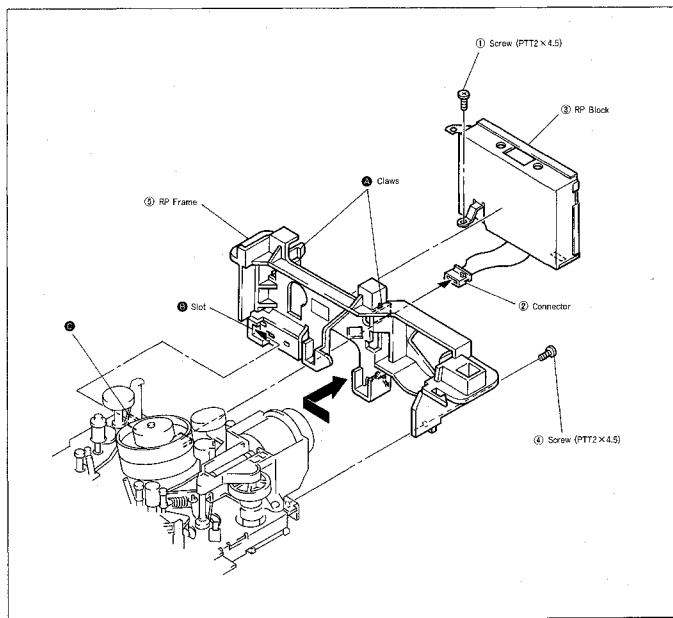


Fig. 7

4-2. IMPEDANCE ROLLER (Fig. 8)

1. Removal

- 1) Referring to 2-1, remove the FL cassette compartment assembly.
- 2) Referring to 4-1, remove the RP block.
- 3) Remove a tension coil spring ①.
- 4) Disengage a claw ④ and remove the impedance roller base assembly ②.
- 5) Disengage a claw ④ and remove the impedance roller ③.

2. Mounting

- 1) Mount the impedance roller ③, then the impedance roller base assembly ②.
- 2) Attach a tension coil spring ①.
- 3) Referring to 4-1, mount the RP block.
- 4) Referring to 2-1, mount the FL cassette compartment assembly.

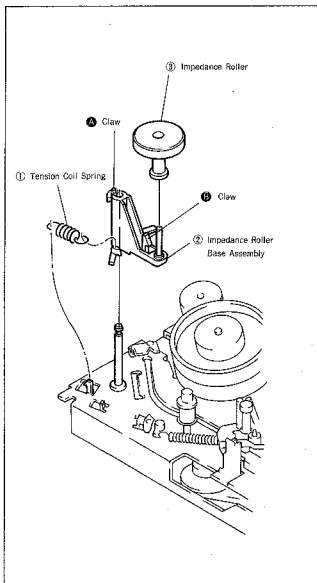


Fig. 8

4-3. HC ROLLER ASSEMBLY (Fig. 9)

1. Removal

- 1) Referring to 4-1, remove the RP block.
- 2) Disengage a claw ④ and remove the HC arm assembly ①.
- 3) Remove a lock washer ②, then the HC roller assembly ③.

2. Mounting

- 1) Mount the HC roller assembly ③ and fix with a lock washer ②.
- 2) Mount the HC arm assembly ①.
- 3) Referring to 4-1, mount the RP block.

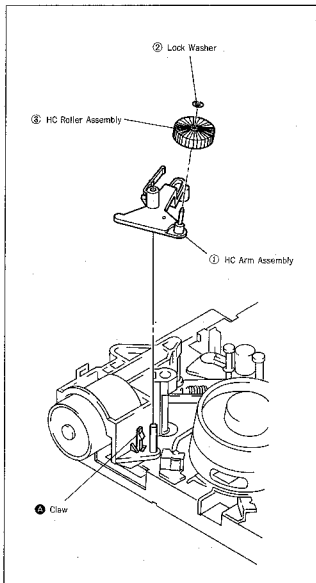


Fig. 9

4-4. PENDULUM BASE ASSEMBLY AND SOFT BRAKE ASSEMBLY (T) (Fig. 10)

1. Removal

- 1) Referring to 2-1, remove the FL cassette compartment assembly.
- 2) Remove a tension coil spring ①.
- 3) Disengage a claw ④ and remove the soft brake (T) assembly ②.
- 4) Remove two screws ③, then the reel unlock plate ④.
- 5) Remove the pendulum base assembly ⑤.

2. Mounting

- 1) Mount the pendulum base assembly ⑤ with its shaft ⑥ inserted in the ⑦ of pendulum forcing arm.
- 2) Mount the reel unlock plate ④ and tighten two screws (3).
- 3) Mount the soft brake (T) assembly ② and attach a tension coil spring ①.
- 4) Referring to 2-1, mount the FL cassette compartment assembly.

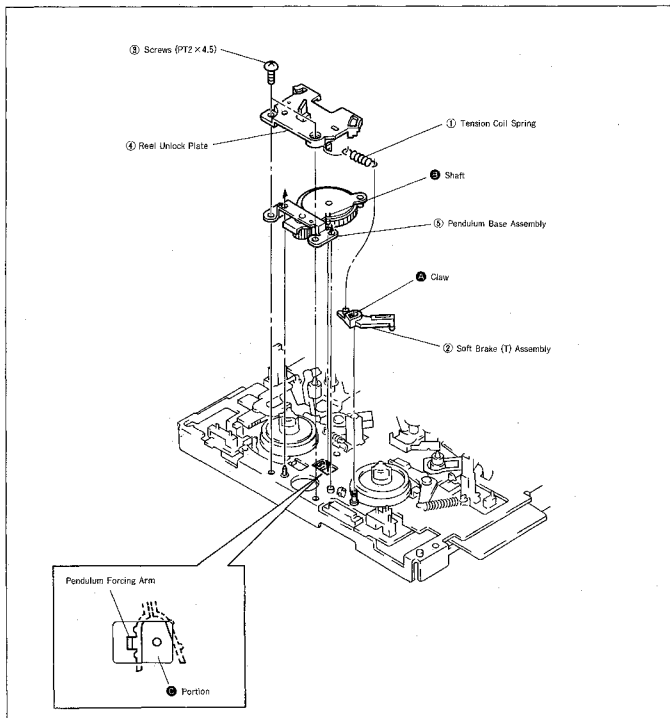


Fig. 10

4-5. BRAKE (S) ARM AND BRAKE (T) ARM ASSEMBLY (Fig. 11)

1. Removal

- 1) Referring to 2-1, remove the FL cassette compartment assembly.
- 2) Remove a tension coil spring ①.
- 3) Disengage a claw ② and remove the brake (S) arm ③.
- 4) Remove a tension coil spring ③.
- 5) Remove a lock washer 1.5 ④, then the brake (T) arm assembly ⑤.

2. Mounting

- 1) Mount the brake (T) arm assembly ⑤ with its shaft inserted into a hole ⑥ in mechanical chassis.
- 2) Attach a lock washer ④.
- 3) Attach a tension coil spring ③.
- 4) Insert the shaft ⑦ of brake (S) arm ② into a groove ⑧ of slide plate, and the shaft ⑥ of brake (S) drive lever into a hole ⑨ in brake (S) arm respectively.
- 5) Attach a tension spring ①.
- 6) Referring to 2-1, mount the FL cassette compartment assembly.

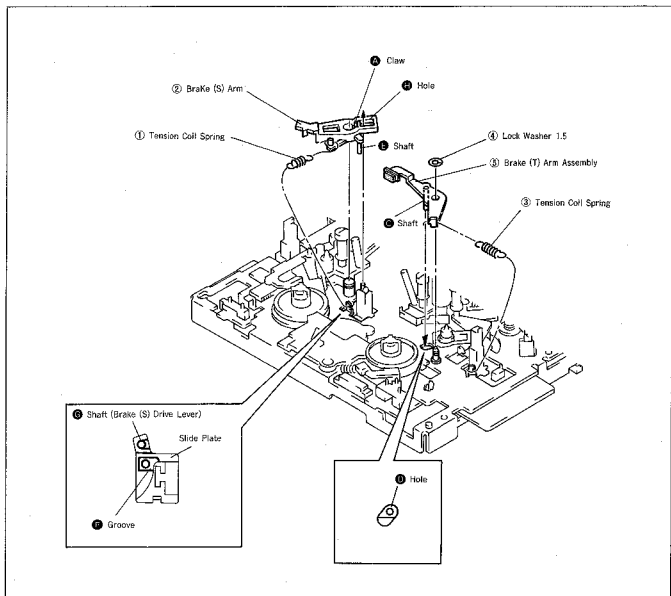


Fig. 11

4-6. TENSION REGULATOR ASSEMBLY, REEL TABLE (S) ASSEMBLY AND REEL TABLE (T) ASSEMBLY (Fig. 12)

1. Removal

- 1) Referring to 2-1, remove the FL cassette compartment assembly.
- 2) Referring to 4-5, remove the brake (S) arm and brake (T) arm assembly.
- 3) Remove a tension coil spring ①.
- 4) Remove a screw ②, then the tension regulator band assembly ③ and the tension regulator assembly ④.

Note : Do not twist or bend, or do not touch the felt surface when removing the tension regulator band assembly.

- 5) Remove the reel table (S) assembly ⑤ and the reel table (T) assembly ⑥.

2. Mounting

- 1) Mount the reel table (S) assembly ⑤ and the reel table (T) assembly ⑥.
- 2) Mount the tension regulator assembly ④ with its shafts A, B inserted into holes C, D in chassis respectively.
- 3) Wind the tension regulator band assembly ③ onto the reel table (S) assembly ⑤.

Note : Do not twist or bend, or do not touch the felt surface when mounting the tension regulator band assembly.

- 4) Mount the tension regulator band assembly ③, meeting with the dowels E of the chassis.
- 5) Tighten a screw ②.
- 6) Attach a tension coil spring ①.
- 7) Referring to 4-5, mount the brake (S) arm and the brake (T) arm assembly.
- 8) Referring to 2-1, mount the FL cassette compartment assembly.
- 9) Referring to 4-23, adjust the tension regulator position.
- 10) Referring to 4-24, adjust the FWD back tension.

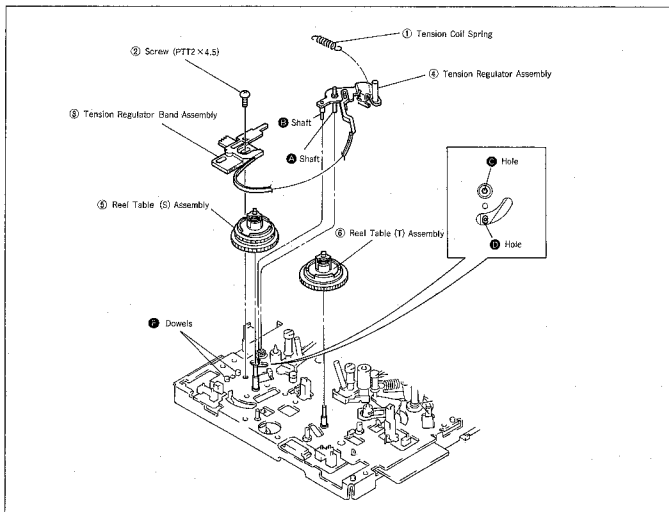


Fig. 12

4-7. TG2 ASSEMBLY (Fig. 13)

1. Removal

- 1) Remove the TG2 upper flange ①.
- 2) Remove the TG2 roller ②, TG2 sleeve ③, TG2 lower flange ④ and compression coil spring ⑤.

2. Mounting

- 1) Mount the compression coil spring ⑤, TG2 lower flange ④, TG2 sleeve ③ and TG2 roller ②.
- 2) Rotate the TG2 upper flange ① by 4 to 6 turns to fix on the shaft.

3. Presetting of TG2 Height

- 1) Rotate to adjust the TG2 upper flange ① so that the height from top surface of mechanical chassis to top surface of TG2 upper flange is 22.12mm.

Note : After mounting, perform 5. Tape Path Adjustment.

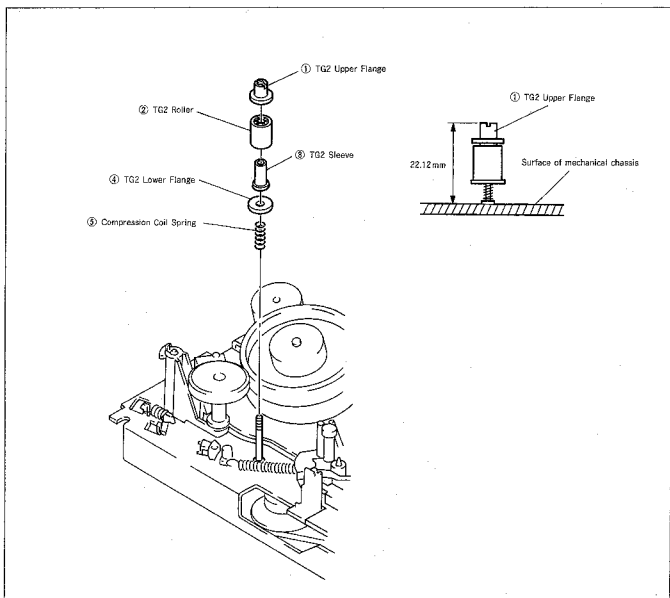


Fig. 13

4-8. TG7 ARM ASSEMBLY (Fig.14)

1. Removal

- 1) Referring to 2-1, remove the FL cassette compartment assembly.
- 2) Remove the TG7 height adjusting screw ①, then the TG7 spacer ② and reel table thrust washer ③.
- 3) Remove the TG7 arm assembly ④ and a torsion coil spring ⑤.

2. Mounting

- 1) Insert the shaft ④ of TG7 arm assembly ④ into a groove ⑥ in TG7 drive lever, and attach a torsion coil spring ⑤ as shown below.
- 2) Mount a reel table thrust washer ③ and a TG7 spacer ②, and tighten tentatively the TG7 height adjusting screw.
- At this time, the height from mechanical chassis top surface to TG7 arm top surface should be 3.3mm.
- 3) Referring to 2-1, mount the FL cassette compartment assembly.

Note : After mounting, perform 5. Tape Path Adjustment.

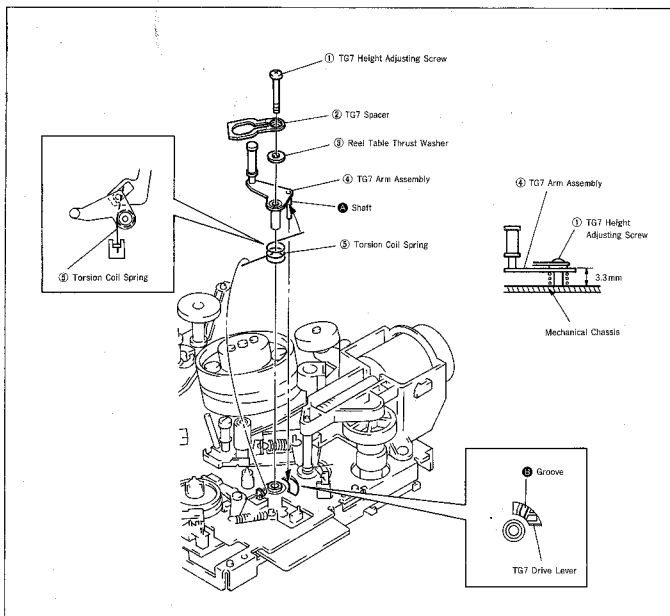


Fig. 14

4-9. CAM MOTOR ASSEMBLY (Fig. 15)

1. Removal

- 1) Referring to 4-1, remove the RP block.
- 2) Remove a screw ①.
- 3) Disengage a claw ④ and remove the cam motor assembly ② in the arrow direction.

2. Mounting

- 1) Mount the cam motor assembly ② with its hole ③ inserted into the shaft ⑥ of chassis.
- 2) Tighten a screw ①.
- 3) Referring to 4-1, mount the RP block.

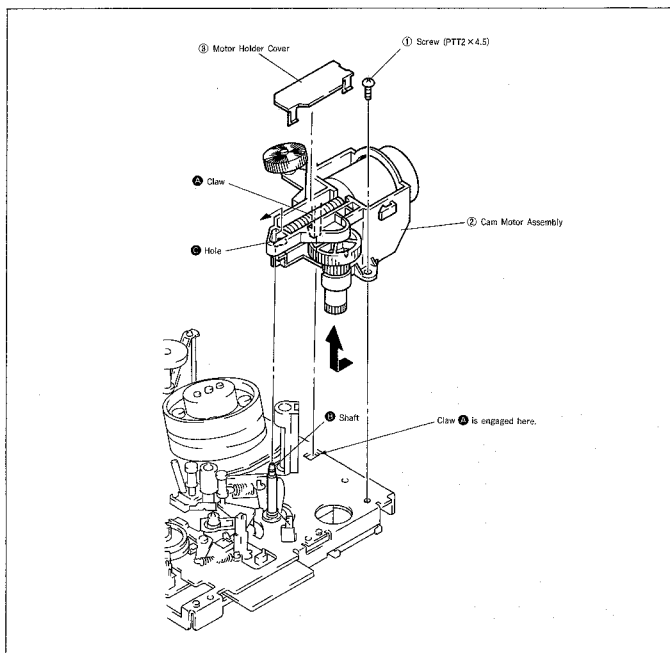


Fig. 15

4-10. PINCH ARM ASSEMBLY (Fig. 16)

1. Removal

- 1) Referring to 2-1, remove the FL cassette compartment assembly.
- 2) Execute the loading until the pinch arm assembly ② becomes level.
- 3) Referring to 4-9, remove the cam motor assembly.
- 4) Remove a torsion coil spring ①, then the pinch arm assembly ②.

2. Mounting

- 1) Mount the pinch arm assembly ② with its hole ④ inserted into the claw ⑤ of pinch drive lever on the chassis.
- 2) Attach a torsion coil spring ① as shown below.
- 3) Referring to 4-9, mount the cam motor assembly.
- 4) Referring to 2-1, mount the FL cassette compartment assembly.

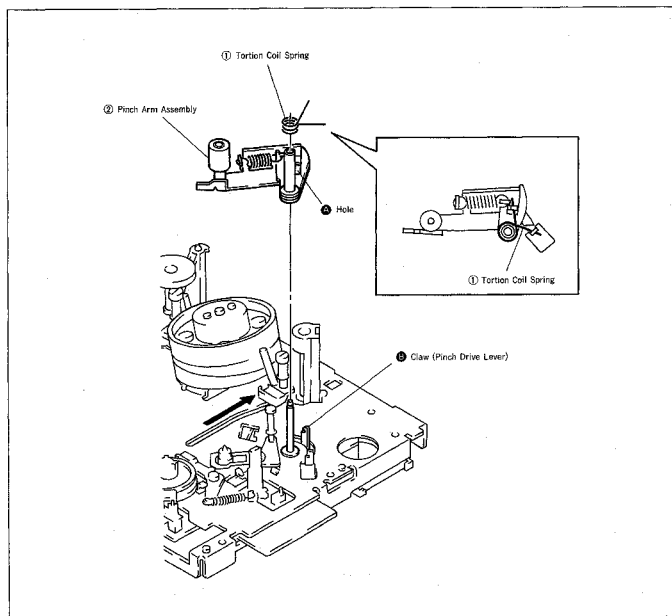


Fig. 16

4-11. WORM WHEEL BRACKET (Fig. 17)

1. Removal

- 1) Remove a screw ①, then the shaft earth assembly ②.
- 2) Remove a screw ③, then the worm wheel bracket ④ in the arrow direction.

2. Mounting

- 1) Mount the worm wheel bracket ④ with its hole ⑤ inserted into the shaft ⑥ of mechanical chassis.
- 2) Tighten a screw ③.
- 3) Mount the shaft earth assembly ② and tighten a screw ①.

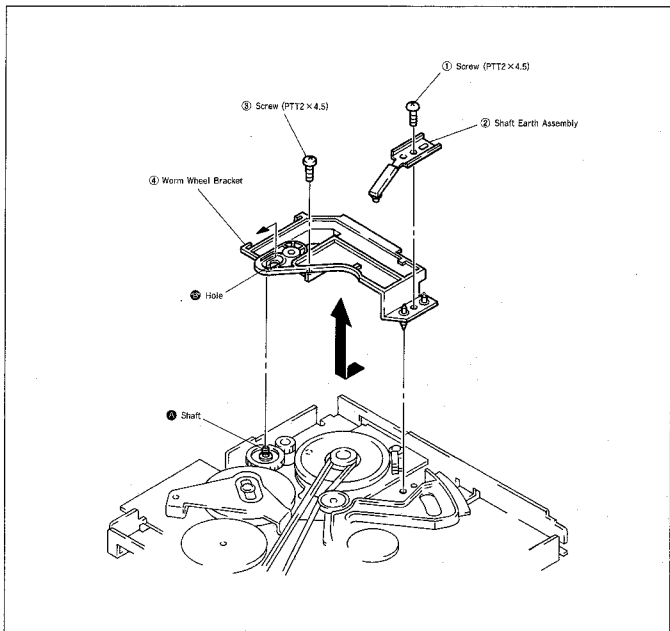


Fig. 17

4-12. CAPSTAN MOTOR (Fig. 18)

1. Removal

- 1) Referring to 4-11, remove the worm wheel bracket.
- 2) Disengage the timing belt ①.
- 3) Remove a screw ②, then the capstan motor ③.

2. Mounting

- 1) Mount the capstan motor ③ with its dowels ④ inserted into holes ⑤ in the mechanical chassis at two places.

Note : Do not touch the capstan motor shaft, oil seal and rotor.

- 2) Tighten a screw ②.
- 3) Engage the timing belt ①.
- 4) Referring to 4-11, mount the worm wheel bracket.

Note : After mounting, perform 5. Tape Path Adjustment.

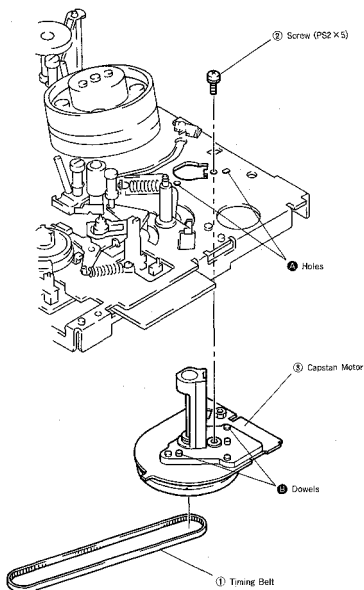


Fig. 18

4-13. DRUM ASSEMBLY (Fig. 19)

1. Removal

- 1) Referring to 4-1, RP Block, disconnect the connector for drum.
- 2) Remove three screws (M2x5) ①.
- 3) Remove the drum assembly ②.

Note : Do not touch the outer surface of drum; hold portions (A) and (B) of drum.

2. Mounting

- 1) Mount the drum ② while aligning with dowels ④ of chassis at two places.

Note : Do not touch the outer surface of drum; hold portions (A) and (B) of drum.

- 2) Tighten three screws (M2x5) ①.
- 2)-1 Tighten a screw ③ to the torque $29.42\text{mN}\cdot\text{m}$ (300g·cm).
- 2)-2 Tighten a screw ⑥ to the torque $29.42\text{mN}\cdot\text{m}$ (300g·cm), then return 45° . (Apply a screw locking agent.)
- 2)-3 Tighten a screw ② to the torque $29.42\text{mN}\cdot\text{m}$ (300g·cm), then return 45° . (Apply a screw locking agent.)

Note : After mounting, perform 5. Tape Path Adjustment.

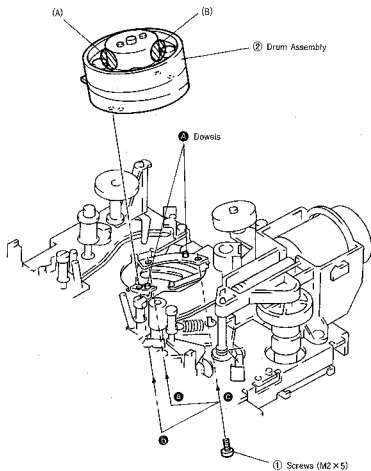


Fig. 19

4-14. PULLEY BASE ASSEMBLY (Fig. 20)

1. Removal

- 1) Remove a screw ①, then the W2, middle ②.
- 2) Disengage a claw ④ and remove the pulley base assembly ③.

2. Mounting

- 1) Mount the pulley base assembly ③ on the shaft ⑤ of mechanical chassis, and engage the timing belt ⑥ with the pulley ③.
- 2) Mount the W2, middle ② and tighten tentatively the screw ①.
- 3) Tighten the screw ① at the position where the portion (A) of pulley base assembly ③ is pushed with 14g force.

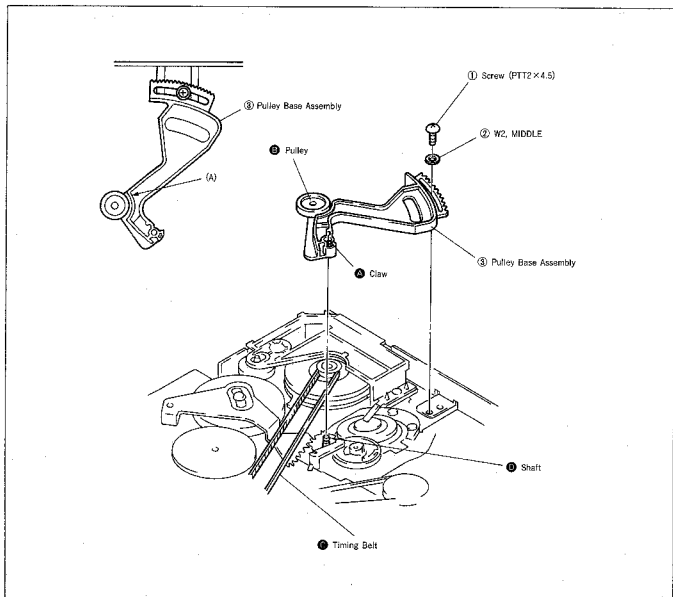


Fig. 20

4-15. LOADING DRIVE LEVER (Fig. 21)

1. Removal

- 1) Disengage the timing belt ①.
- 2) Remove a screw ②, then the W3, small ③.
- 3) Remove the loading drive lever ④.

2. Mounting

- 1) Mount the loading drive lever ④ on the shaft ⑦ of chassis with its shaft ⑧ inserted into the loading roller ⑤.
At this time, insert the shaft ③ of main cam into the hole ⑥ in loading drive lever, the shaft ⑧ of loading drive lever into a slot ⑨ in main cam, and align a line ⑤ on loading drive lever with a line ⑥ on loading gear (T) respectively.
- 2) Mount the W3, small ③ and tighten tentatively the screw ②.
- 3) Engage the timing belt ①.

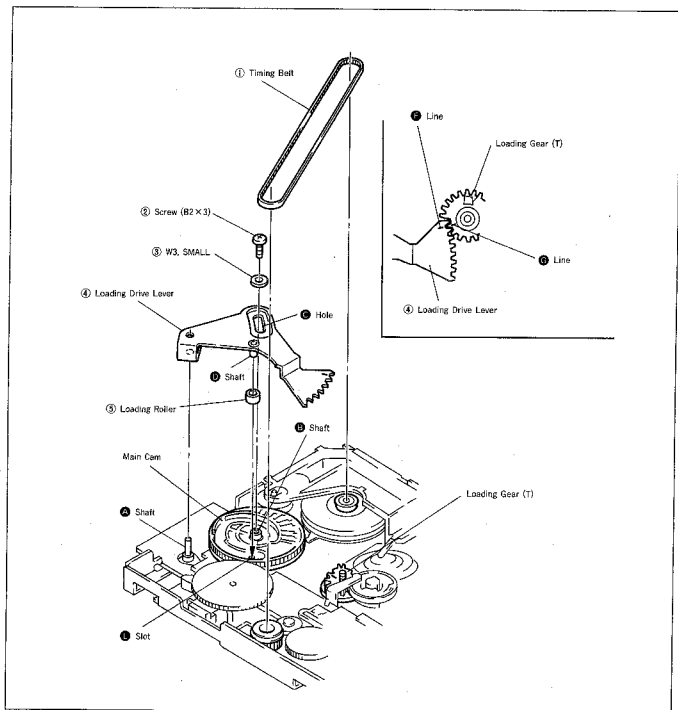


Fig. 21

4-16. ROTARY SWITCH AND MAIN CAM (Fig. 22)

1. Removal

- 1) Referring to 4-11, remove the worm wheel bracket.
- 2) Referring to 4-15, remove the loading drive lever.
- 3) Remove the cam relay gear ①.
- 4) Disengage claws **A** at two places, and disconnect the rotary switch ② from the connector ③.
- 5) Remove the main cam ③.

2. Mounting

- 1) Mount the main cam ③ with its cam groove ⑤ inserted into the shaft ⑦ of slide plate drive lever, and cam groove ⑤ into the shaft ⑦ of pinch drive lever respectively.
- 2) Referring to 4-15, mount the loading drive lever.
- 3) Mount the cam relay gear ①.
- 4) Referring to 4-11, mount the worm wheel bracket.
- 5) Connect the rotary switch ② to the connector ③ while aligning ▲ marks each other, and its recess ④ with the recess ⑥ of main cam ③.

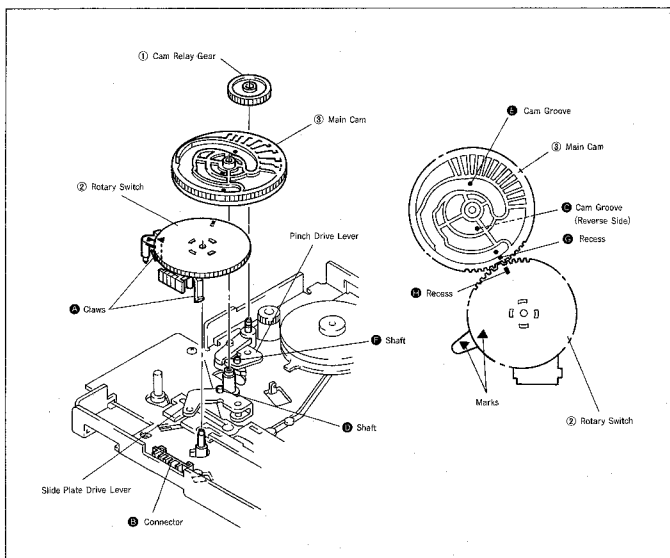


Fig. 22

4-17. SLIDE PLATE (Fig. 23)

1. Removal

- 1) Referring to 4-11, remove the worm wheel bracket.
- 2) Referring to 4-15, remove the loading drive lever.
- 3) Referring to 4-16, remove the rotary switch and main cam.
- 4) Remove the slide plate drive lever ①.
- 5) Disengage the timing belt ②.
- 6) Disengage a claw ③ and remove the FL pulley gear (drive) ④.
- 7) Remove a tension coil spring ⑤, then the FL switching arm assembly ⑥.
- 8) Remove the brake (S) drive lever ⑧.
- 9) Remove two lock washers 1.5 ⑨, then the slide plate ⑦.

2. Mounting

- 1) Mount the slide plate ⑦ with its groove ⑩ inserted into the shaft ⑪ of chassis, the groove ⑩ into the shaft ⑫ of S take-up assembly, and the groove ⑪ into the shaft ⑬ respectively. At this time, insert the shaft ⑭ into the groove ⑫ in slide plate while holding the tension regulator sub-arm toward the arrow.
- 2) Mount two lock washers 1.5 ⑨.
- 3) Referring to 3) of Mounting in 4-18, mount the brake (S) drive lever ⑧.
- 4) Mount the FL switching arm assembly ⑥ and a tension coil spring ⑤.
- 5) Mount the FL pulley gear (drive) ④ and engage the timing belt ②.
- 6) Mount the slide plate drive lever ① with its shaft ① inserted into a groove ⑩ in slide plate ⑦, and its hole into the shaft ⑪ of chassis.
- 7) Referring to 4-16, mount the rotary switch and main cam.
- 8) Referring to 4-15, mount the loading drive lever.
- 9) Referring to 4-11, mount the worm wheel bracket.

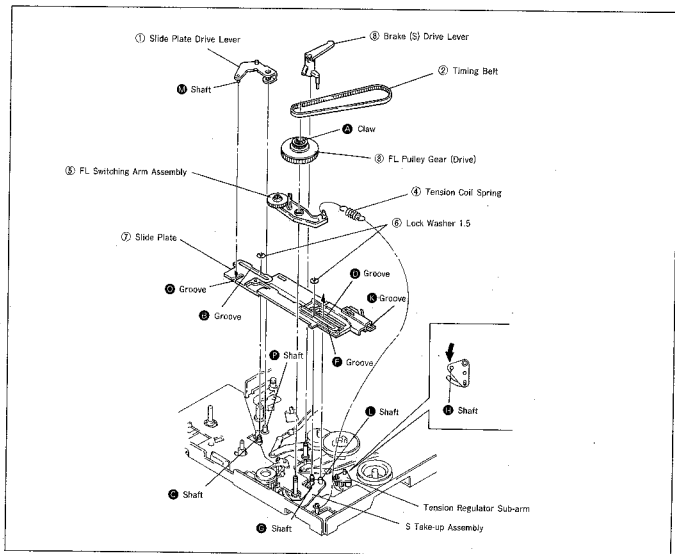


Fig. 23

4-18. LOADING GEAR (S) ASSEMBLY (Fig. 24)

1. Removal

- 1) Referring to 4-15, remove the loading drive lever.
- 2) Disengage a claw **A** and remove the brake (S) drive lever **①**.
- 3) Remove the coaster leaf spring **②**.
- 4) Disengage a claw **B** and remove the loading gear (S) assembly **③**.

2. Mounting

- 1) Mount the loading gear (S) assembly **③** on the shaft **⑩** of chassis with its arm engaged with the shaft **⑪** of coaster.
At this time, align the portion **⑤** of loading gear (T) assembly with the portion **⑦** of loading gear (S) assembly.
- 2) Mount the coaster leaf spring **②**.
- 3) Mount the brake (S) drive lever **①** on the shaft **⑫** of chassis with its shaft **④** inserted into the portion **⑥** of brake (S) arm, and the shaft **③** into the groove **⑧** in loading gear (S) assembly **③**.
- 4) Referring to 4-15, mount the loading drive lever.

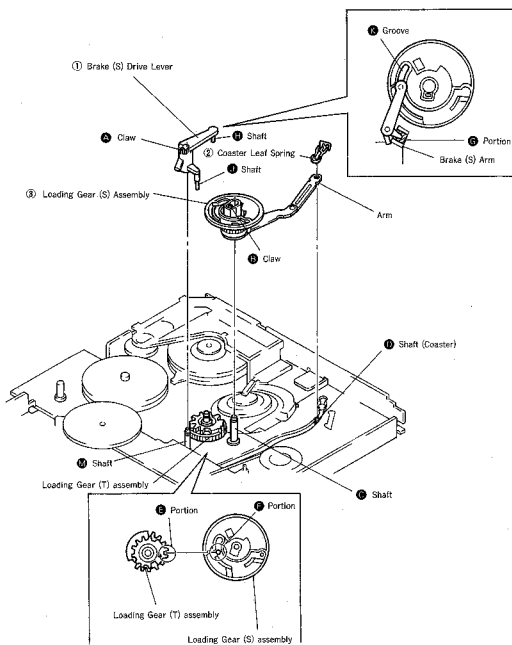


Fig. 24

4-19. LOADING GEAR (T) ASSEMBLY (Fig. 25)

1. Removal

- 1) Referring to 4-15, remove the loading drive lever.
- 2) Referring to 4-18, remove the loading gear (S) assembly.
- 3) Remove the coaster leaf spring ①, then the loading gear (T) assembly ②.

2. Mounting

- 1) Mount the loading gear (T) assembly ② on the shaft ④ of chassis with its arm engaged with the shaft ③ of coaster.
- 2) Mount the coaster leaf spring ①.
- 3) Referring to 4-18, mount the loading gear (S) assembly.
- 4) Referring to 4-15, remove the loading drive lever.

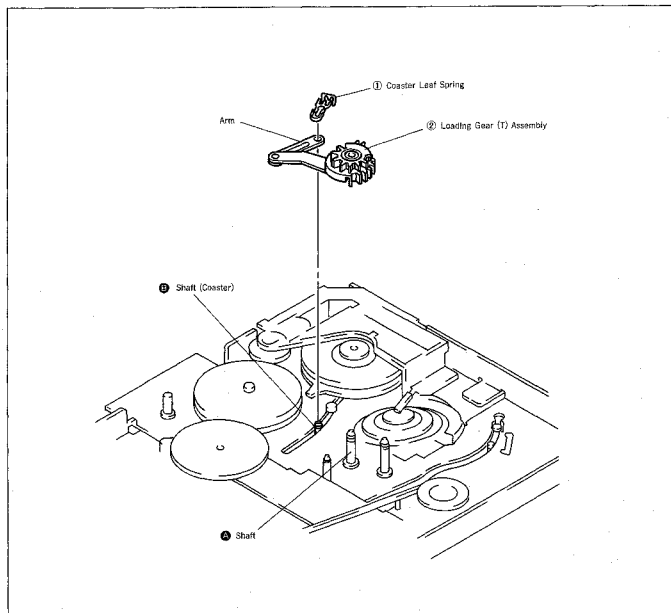


Fig. 25

4-20. COASTER (S) (Fig. 26)

1. Removal

- 1) Referring to 4-2, remove the impedance roller assembly.
- 2) Remove a screw ①, then the catcher (S) ②.
- 3) Remove the coaster leaf spring ③, then the coaster (S) ④.

2. Mounting

- 1) Mount the coaster (S) ④.
- 2) Mount the catcher (S) ② with its holes inserted into dowels A of chassis at two places.
- 3) Tighten a screw ①.
- 4) Referring to 4-18 Loading Gear (S) Assembly, mount the coaster leaf spring ③.
- 5) Referring to 4-2, mount the impedance roller assembly.

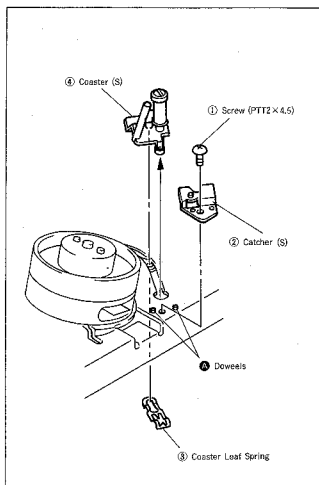


Fig. 26

4-21. COASTER (T) (Fig. 27)

1. Removal

- 1) Remove a screw ①, then the catcher (T) ②.
- 2) Remove the coaster leaf spring ③, then the coaster (T) ④.

2. Mounting

- 1) Mount the coaster (T) ④.
- 2) Mount the catcher (T) ② with its holes inserted into dowels A of chassis at two places.
- 3) Referring to 4-19 Loading Gear (T) Assembly, mount the coaster leaf spring ③.

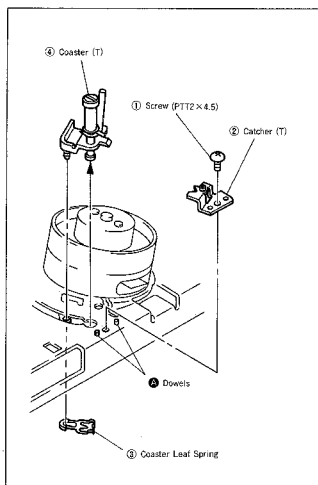


Fig. 27

4-22. ROTARY UPPER DRUM REPLACEMENT

1. Removal

• If possible, make a recording before removal.

- 1) Remove the two screws ① (Fig. 28).
- 2) Mount the jig ② (Ref. No. J-8) with the two supplied screws ③, then screw the attached hexagon socket screws ④ to the jig ②. The rotary upper drum ⑤ will move upward and come off (Fig. 29).

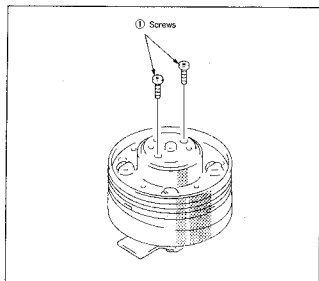


Fig. 28

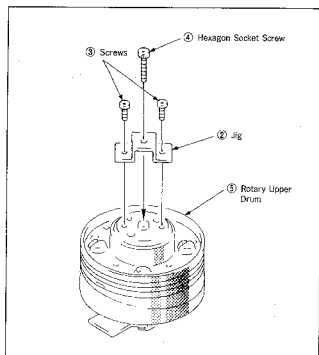


Fig. 29

2. Installation

- 1) Wipe clean the flange surface and the rotary upper drum ⑤ surface that makes contact with it, and confirm that they are free from dirt and scratches.
- 2) Insert the jig ⑥ (Ref. No. J-8) into the drum positioning hole, then set then set the rotary upper drum ⑤ by passing the jig through its positioning hole ⑦. (Fig.30)
- 3) Remove the jig ⑥ and push down the rotary upper drum ⑤ gently by hand. If it does not go all the way down, secure it temporarily by tightening the two screws ① alternately (Fig.28).
- 4) Tighten strongly both two screws ①, and loosen both screws once, then tighten them again (for stable seating).
- 5) Insert the jig ⑥ into the positioning hole ⑦ again and confirm that it goes in smoothly. If it does not, loosen the two screws ①, repeat step 2) of the Removal paragraph and restart the setting procedure.
- 6) Tighten the screws ①.

Note : After installing, be sure to perform tape path adjustment as described in section 5.

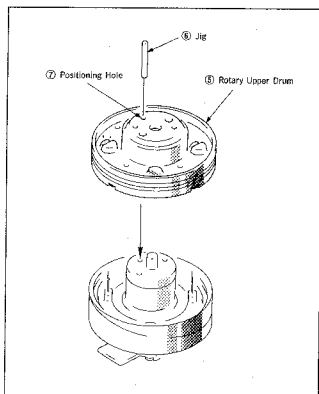


Fig. 30

4-23. ADJUSTMENT OF TENSION REGULATOR POSITION (Fig. 31)

1. Adjustment

- 1) Set a cassette tape and run the tape in the PB mode.
- 2) With the tape running, check that the distance from No.1 guide to No. 2 guide upper flange is 5.5 mm. (On the centerline of TG2 guide)
- 3) If they are not at the specified positions, perform adjustment in step 4) and subsequent steps.
- 4) Loosen the screw ①.
- 5) If No.1 guide is located inside the specified position, shift the tension adjusting base toward the arrow A using the FWD B.T. adjusting driver (Ref No. J-13). Or, if it is located outside, shift toward the arrow B.
- 6) Tighten the screw ①.

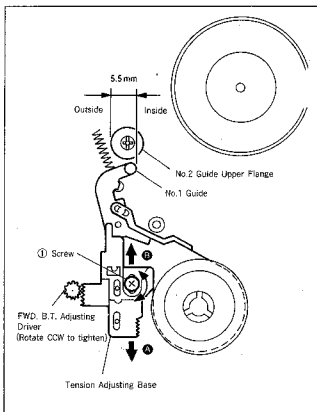


Fig. 31

4-24. FWD BACK TENSION ADJUSTMENT (Fig. 32)

- 1) Select the TEST mode 1 using the adjusting remote controller (Ref No. J-10).
- 2) Set the torque cassette (Ref No. J-7).
- 3) Select the FWD mode, and check that the torque of S reel table is $0.88 \sim 1.17\text{mN}\cdot\text{m}$ ($9 \sim 12\text{g}\cdot\text{cm}$). If it is out of standard, adjust the tension adjusting arm position.

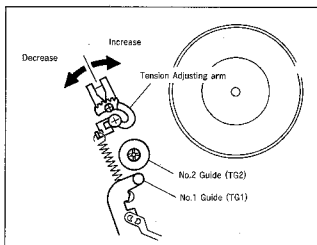


Fig. 32

4-25. REEL TORQUE CHECK

- 1) Set the torque cassette.
- 2) Select the FWD mode, and check that the torque fluctuation center of T reel table is $0.98 \sim 1.96\text{mN}\cdot\text{m}$ ($10 \sim 20\text{g}\cdot\text{cm}$).
- 3) Select the RVS mode, and check that the torque fluctuation center of S reel table is $1.77 \sim 2.75\text{mN}\cdot\text{m}$ ($18 \sim 28\text{g}\cdot\text{cm}$).
- 4) Select the REV mode, and check that the torque of T reeltable is $0.98 \sim 1.96\text{mN}\cdot\text{m}$ ($10 \sim 20\text{g}\cdot\text{cm}$).
- 5) If the above data is not satisfied, the tension regulator band, T hard tab or T soft assembly will be faulty. Check them first, and if no abnormality is found, replace respective reel tables.

4-26. FL WORM WHEEL (Fig. 33)

1. Removal

- 1) Disengage tabs ④ at four places and remove the gear cover ①.
- 2) Remove the drive gear ②, then the FL worm wheel ③.

2. Mounting

- 1) Mount the FL worm wheel ③.
- 2) Meet a hole ⑥ in drive arm (T) on right side with a hole in chassis, and also a hole ⑥ in FL worm wheel ③ with a hole in side plate.
Meet a hole ⑥ in drive gear ② with a hole in side plate.
Meeting respective holes, mount the drive gear ②.
- 3) Mount the gear cover ①.

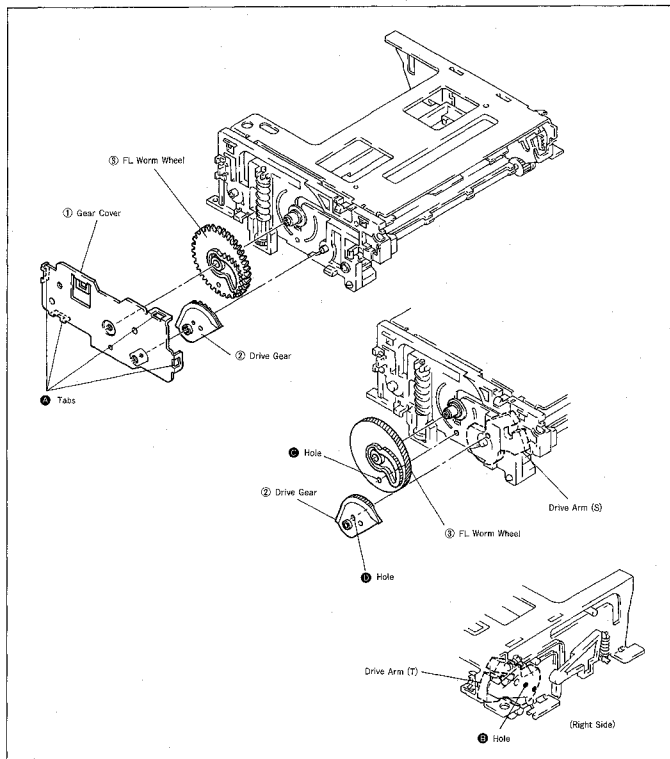


Fig. 33

5. TAPE PATH ADJUSTMENT

The 8mm video system uses ATF (Automatic Track Finding) which instantaneously controls a tape running speed based on 4 types of pilot signals and performs high-precision tracking.

This does away a tracking control knob and allows accurate track tracing.

On the other hand, however, the ATF system has a problem in adjusting the tape path system. That is, if head tracing is out of order a little, the ATF automatically corrects it, which means that perfect adjustment cannot be done.

Therefore, in the F mechanism, the ATF system is forcibly operated to shift a tracking amount constantly (approx. 1/4) by setting the PATH mode with the adjusting remote controller (Ref No. J-10). So, fine tracking adjustment can be easily done.

Also, the PATH mode setting varies with the model, and therefore, refer to the Service Manual.

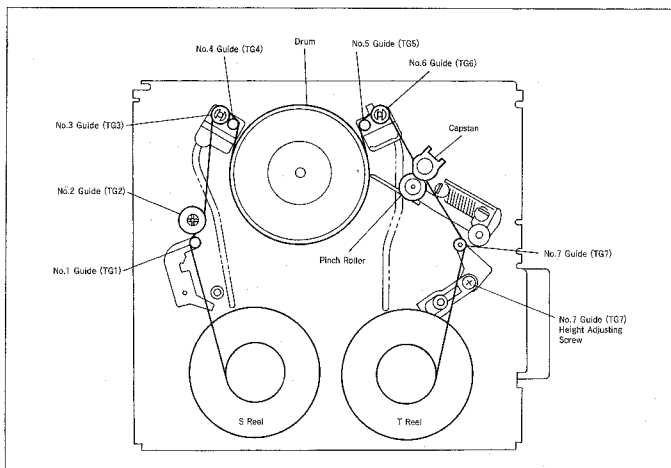


Fig. 34

[Note on Adjustment of No.7 Guide (TG7)]

The height adjustment screw for No.7 guide (TG7) is located at some distance from the guide (refer to Fig.42).

Therefore, when performing section 5-4. No.7 Guide (TG7)

Adjustment it is convenient to use the alignment tape for tracking (Ref. No. J-6), modified as follows, and perform adjustment in playback mode.

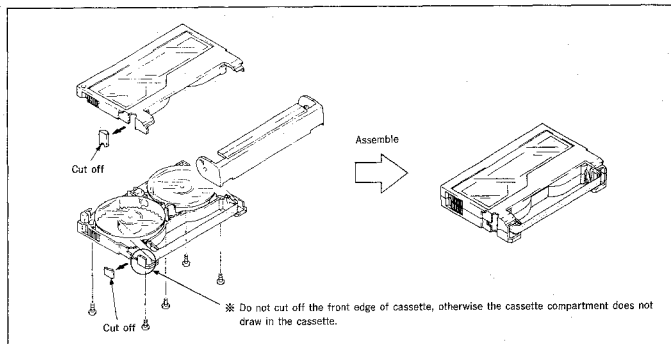


Fig. 35

5-1. PREPARATION FOR ADJUSTMENT

- 1) Clean the tape running surface (tape guides, drum, capstan shaft, pinch roller) (Fig. 34).
- 2) Set the PATH mode using the adjusting remote controller.
- 3) connect an oscilloscope to the check pin connector of the set.
- 4) Play back a tracking alignment tape (NTSC : WR5-1NP, or PAL : WR5-1CP).
- 5) Check that a RF waveform is flat at the inlet and outlet of the oscilloscope (Fig. 36 ㉔).

If not flat, make adjustment with the procedures below.

When the RF waveform is not flat at the inlet/outlet ; See Fig. 36 ㉕ and ㉖.

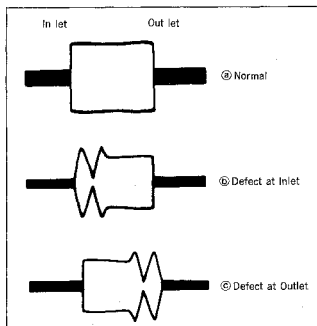


Fig. 36

5-2. TRACKING ADJUSTMENT (Fig. 37, 38)

- 1) Play back the tracking alignment tape.
- 2) Loosen the No.3 guide (TG3) lock screw ① and turn the No.3 guide to flatten the waveform at the inlet.
- 3) Tighten the No.3 guide (TG3) lock screw ① to lock the No.3 guide.
- 4) Loosen the No.6 guide (TG6) lock screw ② and turn the No.6 guide to flatten the waveform at the outlet.
- 5) Tighten the No.6 guide (TG6) lock screw ② to lock the No.6 guide. When this is done, make sure that the waveform does not change at the outlet.

Note : Be careful not to loosen the lock screw too much because the guide is easily moved.

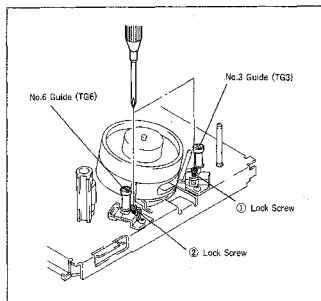


Fig. 37

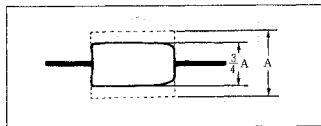


Fig. 38

5-3. No.2 GUIDE (TG2) ADJUSTMENT

When the No.2 guide has been turned or replaced, perform height presetting before this adjustment.

5-3-1. No. 2 GUIDE (TG2) HEIGHT PRESETTING (Fig. 39)

- 1) Rotating the TG2 upper flange, adjust the height from top surface of mechanical chassis to top surface of TG2 upper flange to 22.12mm.

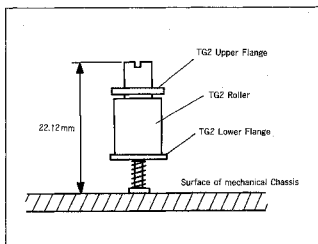


Fig. 39

[Reference]

This F mechanism is equipped with four adjustable guides (TG2, 3, 6 and 7). To raise or lower the respective guide rotate the corresponding adjustment screw as shown below.

Guide	Guide adjustment	Rotating direction of adjustment screw
TG2, 3, 6	Raise	Counterclockwise
	Lower	Clockwise
TG7	Raise	Clockwise
	Lower	Counterclockwise

5-3-2. No. 2 GUIDE (TG2) ADJUSTMENT (Fig. 40, 41)

- 1) Play back a thin tape like the P6-120MP, etc. and set the REV mode.
 - 2) Confirm that the tape is not bent at the lower flange ② of the No.2 guide (TG2) ① (Fig. 40). If it is, turn the upper flange ③ of the No.2 guide (TG2) clockwise with a screwdriver, lowering it until the tape is straightened.
 - 3) Play back the alignment tape for tracking adjustment.
 - 4) Perform tracking adjustment and tracking fine adjustment as described in sections 5-2.
 - 5) In the track shift mode, CUE/REV the tape, then play it back and confirm that the RF waveform rises flat within 2 seconds.
 - 6) If the waveform is not normal (Fig. 41), turn the upper flange ③ of the No. 2 guide (TG2) ① 90° counterclockwise and repeat step 5.
- Repeat steps 5) and 6) until a normal waveform is obtained. Then, confirm that the tracking waveform has not changed. If it has, perform fine adjustment of entrance side tracking and repeat step 5).

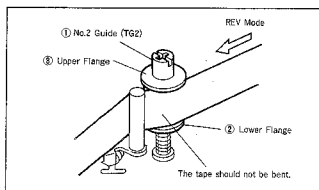


Fig. 40

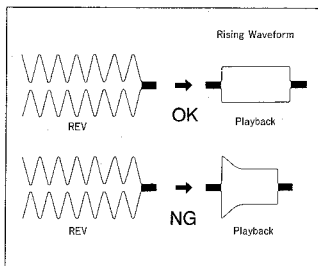


Fig. 41

5-4. No.7 GUIDE (TG7) ADJUSTMENT (Fig. 42)

Note: This adjustment requires the No. 7 guide adjusting cassette (Fig. 35).

- 1) Play back the No.7 guide adjusting cassette and set the REV mode.
- 2) Confirm that the tape is not bent between the No.6 guide (TG6) ① and the capstan ②. If it is, turn the height adjusting screw ④ of the No.7 guide (TG7) ③ until the tape is straightened.
- 3) Set the playback mode again and confirm that the tape is not bent between the capstan ② and the No.7 guide (TG7) ③ (specification : 0.5mm or less). If the tape is bent beyond the specification, turn the height adjusting screw ④ until bending is within the specification (0.5mm).

If in the REV mode tape bending between the No. 6 guide (TG6) ① and the capstan ② is 0.3mm or less, adjustment can be considered completed.

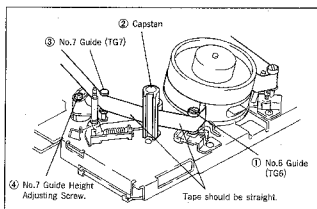


Fig. 42

5-5. CUE AND REV WAVEFORM CHECK (Fig. 43)

- 1) Play back the alignment tape for tracking adjustment and set the REV mode. Confirm that waveform peaks maintain a constant pitch of 5 seconds or more (Fig. 43). In case pitch is not constant, perform section 5-2.Tracking Fine Adjustment and section 5-4. No.7 Guide Adjustment.
- 2) Set the CUE mode. Confirm that waveform peaks still maintain a constant pitch of 5 seconds or more (Fig. 43). Otherwise, perform section 5-2.Tracking Fine Adjustment.

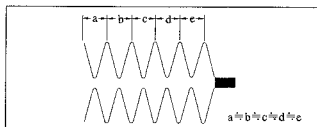


Fig. 43

5-6. CHECK AFTER ADJUSTMENT

5-6-1. TRACKING CHECK

- 1) Confirm that the amplitude of RF waveform is reduced to approx. 3/4 when the track shift mode is set (Fig. 44).
- 2) Then, confirm that the minimum amplitude value (EMIN) is 65% of the maximum value (EMAX) or larger (Fig. 45).
- 3) Confirm that no large fluctuations occur on the waveform (Fig. 45).

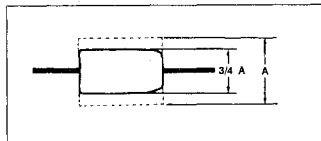


Fig. 44

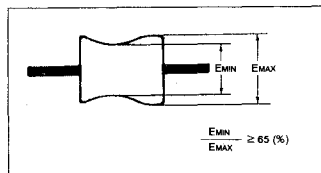


Fig. 45

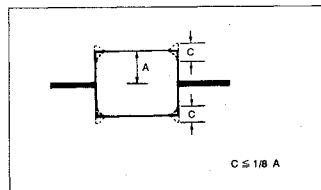


Fig. 46

5-6-2. RISING CHECK (Fig. 47)

- 1) Play back the alignment tape for tracking adjustment.
- 2) Cancel the track shift mode.
- 3) Eject the tape, then load it again.
- 4) Set the playback mode and confirm that the RF wave form rises flat within 2 seconds. Also confirm that the tape is not bent around the pinch roller.
- 5) CUE/REV and FF/REW the tape, then play it back and confirm that the RF waveform rises flat within 2 seconds. Also confirm that the tape is not bent around the pinch roller.
- 6) Repeat steps 3) to 5) once more.

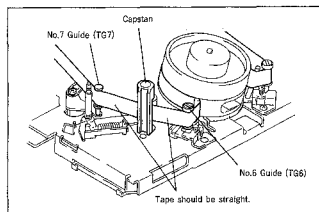


Fig. 47

5-6-3. TAPE PATH CHECK (Fig. 48)

- 1) Play back a thin tape like the P6-120MP (NTSC) or P5-90MP (PAL), etc. and confirm that no tape rising occurs, and that curling is less than 0.3mm, at the lower flange of the No. 2 guide, the upper flange of the No. 3 guide, the upper flange of the No. 6 guide and the No. 7 guide upper and lower flanges.
- 2) Confirm that no tape rising occurs and that curling is less than 0.3mm at the flange of all guide when pressing the FF button in the playback mode to set the CUE mode, or the REW button to set the REV mode.

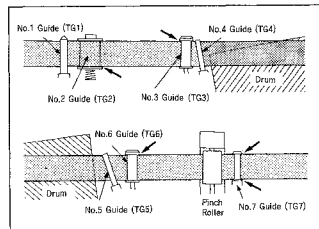


Fig. 48



SECTION 6 EXPLODED VIEWS

NOTE:

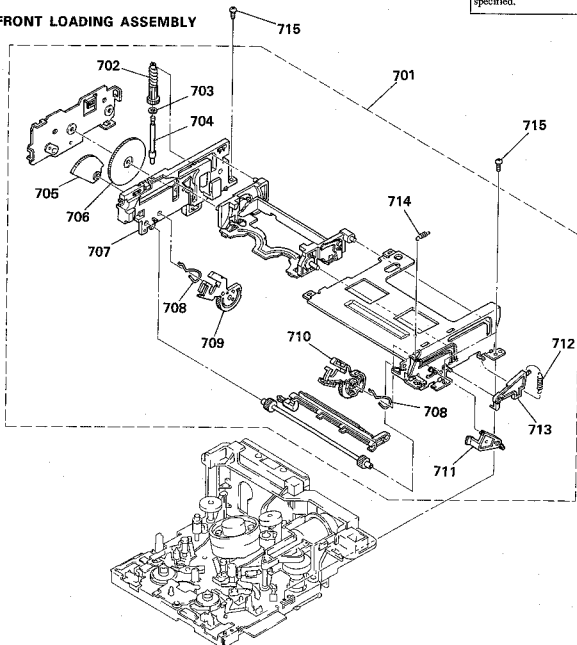
● Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

● The mechanical parts with no reference number in the exploded views are not supplied.

● Hardware (#mark) list is given in the last of this parts list.

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

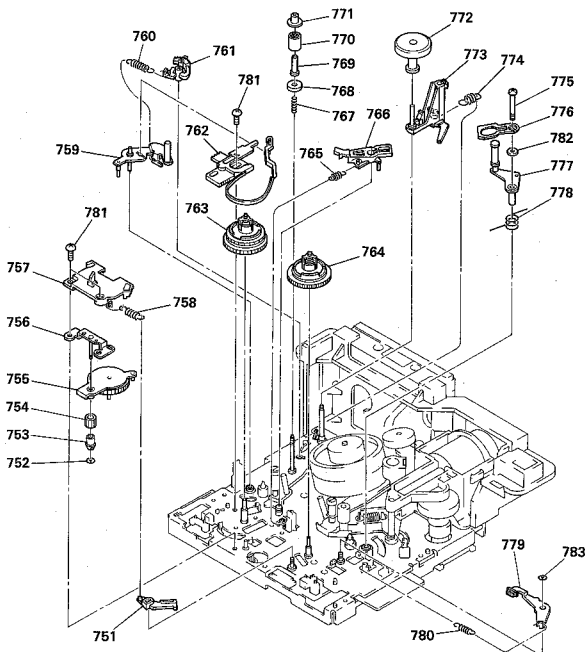
6-1. FRONT LOADING ASSEMBLY



Ref.No.	Part No.	Description	Remark
701	A-7091-941-A	FL BLOCK ASSY	
702	3-954-028-01	GEAR, FL WORM	
703	3-738-212-11	RETAINER, THRUST, REEL TABLE	
*704	3-954-029-01	SHAFT, FL WORM GEAR	
705	3-954-030-01	GEAR, DRIVING	
706	3-954-019-01	WHEEL, FL WORM	
*707	3-954-032-01	PLATE (S), SIDE	
708	3-954-042-01	SPRING, PRESS	

Ref.No.	Part No.	Description	Remark
709	3-954-034-01	ARM (S), DRIVING	
710	3-954-033-01	ARM (T), DRIVING	
*711	3-954-041-01	ARM, DOOR SWITCHING	
712	3-954-043-01	SPRING, TENSION	
*713	3-954-040-01	ARM, CASSETTE IN SWITCH	
714	3-954-044-01	SPRING, TENSION	
715	3-732-817-01	SCREW (2X4.5), TAPPING	

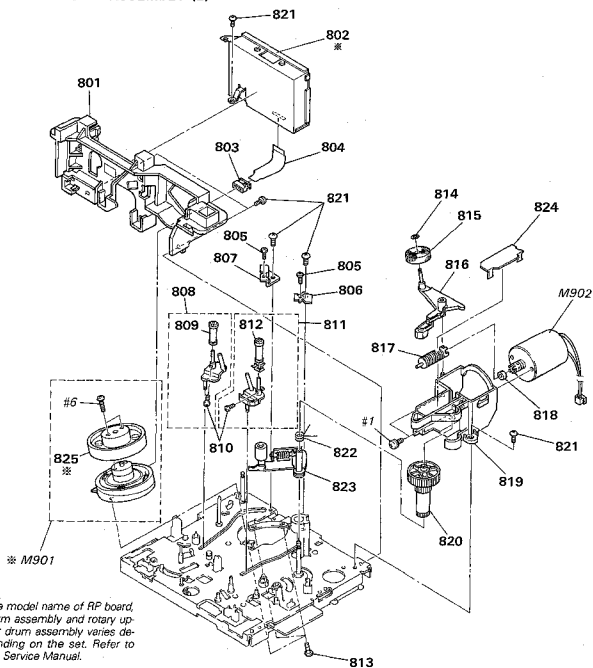
6-2. MD CHASSIS ASSEMBLY (1)



Ref. No.	Part No.	Description	Remark
751	X-3943-111-1	BASE ASSY, PENDULUM	
752	3-726-829-01	WASHER, STOPPER	
753	3-954-321-01	BEARING, PENDULUM DRIVING	
754	3-954-059-01	GEAR, PENDULUM DRIVING	
755	X-3942-951-1	GEAR ASSY, PENDULUM	
756	X-3943-162-1	BASE ASSY, PENDULUM	
*757	3-954-063-01	PLATE, RELEASE, REEL LOCK	
758	3-955-142-01	SPRING, TENSION	
759	X-3942-955-1	TENSION REGULATOR ASSY	
760	3-954-074-01	SPRING, TENSION	
761	3-954-103-01	ARM, TENSION ADJUSTMENT	
762	X-3942-956-1	BAND ASSY, TENSION REGULATOR	
763	X-3942-954-1	TABLE (S) ASSY, REEL	
764	X-3942-953-1	TABLE (T) ASSY, REEL	
765	3-954-085-01	SPRING, TENSION	
766	3-954-071-01	ARM, BRAKE (S)	
767	3-954-001-01	SPRING, COMPRESSION	

Ref. No.	Part No.	Description	Remark
768	3-726-882-02	FLANGE, LOWER, TG2	
769	3-726-885-01	SLEEVE, TG2	
770	3-726-883-31	ROLLER, TG2	
771	3-726-884-01	FLANGE, UPPER, TG2	
772	3-954-282-01	ROLLER (M)	
773	X-3943-015-1	BASE ASSY, ROLLER	
774	3-954-284-01	SPRING, TENSION	
775	3-954-096-01	SCREW, TG HEIGHT ADJUSTMENT	
776	3-954-003-01	SPACER, TG	
777	X-3942-958-1	ARM ASSY, TG	
778	3-954-003-01	SPRING (TG7), TORSION	
779	X-3943-161-1	BRAKE (T) ASSY	
780	3-953-978-01	SPRING, TENSION	
781	3-732-817-01	SCREW (2M4.5), TAPPING	
782	3-738-212-11	RETAINER, THRUST, REEL TABLE	
783	3-669-465-00	WASHER (1.5), STOPPER	

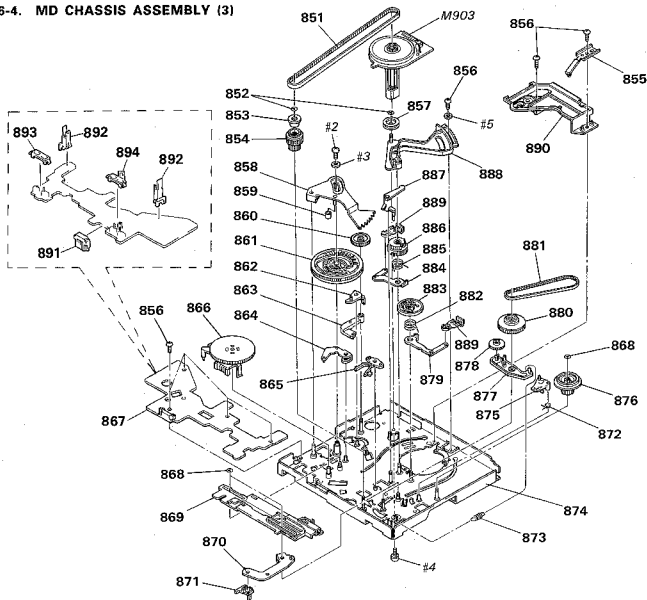
6-3. MD CHASSIS ASSEMBLY (2)



Ref. No.	Part No.	Description	Remark
*801	3-955-623-01	FRAME, RP	
*802	※	RP BOARD, COMPLETE	
803	1-691-471-11	CONNECTOR, TRANSLATION 11P	
804	1-649-565-11	FP-606 FLEXIBLE BOARD	
805	3-954-285-01	SCREW (M1.4X0.2)	
806	3-954-091-01	CATCHER (T)	
807	3-954-090-01	CATCHER (S)	
808	A-7040-338-A	COASTER (S) BLOCK ASSY	
809	X-3941-755-1	ROLLER ASSY (2), TG3	
810	3-947-504-01	SCREW (M1.2X2)	
811	A-7040-339-A	COASTER (T) BLOCK ASSY	
812	X-3941-756-1	ROLLER ASSY (2), TG6	
813	3-686-493-01	SCREW (M2X5), P1	
814	3-321-393-01	WASHER, STOPPER	

Ref. No.	Part No.	Description	Remark
815	X-3943-192-1	ROLLER ASSY, HC	
816	X-3942-947-1	ARM ASSY, HC	
817	3-733-395-01	GEAR (CAM), WORM	
818	3-696-386-01	RUBBER, JOINT	
819	3-954-024-01	HOLDER, MOTOR	
820	3-954-023-01	WHEEL, CAM WORM	
821	3-732-817-01	SCREW (2X4.5), TAPPING	
822	3-954-105-01	SPRING (PINCH DRIVING)	
823	X-3942-945-1	ARM ASSY, PINCH	
824	3-958-047-02	MOTOR HOLDER COVER	
825	※	DRUM, UPPER, ROTARY	
M901	※	DRUM ASSY	
M902	X-3942-946-1	MOTOR ASSY, CAM	

6-4. MD CHASSIS ASSEMBLY (3)



Ref.No.	Part No.	Description	Remark
851	3-953-986-01	BELT, TIMING	
852	3-726-829-01	WASHER, STOPPER	
853	3-954-102-02	FLANGE, REEL RELAY	
854	3-954-061-01	GEAR, REEL RELAY	
855	X-3942-960-11	GROUND ASSY, SHAFT	
856	3-732-817-01	SCREW (2X4.5), TAPPING	
857	X-3943-016-11	PULLEY ASSY, BELT	
*858	3-954-014-01	LEVER, LOADING DRIVING	
859	3-954-323-01	ROLLER, LOADING	
860	3-954-015-01	GEAR, CAM RELAY	
861	3-954-060-01	CAM, MAIN	
*862	3-954-009-01	LEVER, PINCH DRIVING	
863	3-954-016-01	LEVER, TG DRIVING	
*864	3-954-007-01	LEVER, SLIDE PLATE DRIVING	
865	3-953-973-01	ARM, PENDULUM COMPUSSION	
866	1-602-498-11	SWITCH, ROTARY	
*867	1-548-300-11	MD-59 BOARD	
868	3-669-465-00	WASHER (1.5), STOPPER	
869	3-953-972-01	PLATE, SLIDE	
*870	3-953-974-01	ARM, S TAKE-UP	
871	3-953-975-01	CLAW, S TAKE-UP	
872	3-956-366-01	SPRING, TORSION	
873	3-953-982-01	SPRING, TENSION	

Ref.No.	Part No.	Description	Remark
*874	X-3942-952-1	CHASSIS ASSY, MECHANICAL	
875	3-954-100-01	ARM, TENSION REGULATOR SUB	
876	3-953-983-01	GEAR, FL PULLEY	
877	3-953-979-01	ARM, FL SELECTION	
878	3-953-980-01	GEAR, FL SELECTION	
879	X-3942-949-1	ARM (S) ASSY, LOADING	
880	3-953-991-01	GEAR (DRIVING), FL PULLEY	
881	3-954-079-01	BELT (FL), TIMING	
882	3-953-998-01	SPRING (S), TORSION	
883	3-953-991-01	GEAR (S), LOADING	
884	X-3942-948-1	ARM (T) ASSY, LOADING	
885	3-954-000-01	SPRING (T), TORSION	
886	3-953-992-01	GEAR (T), LOADING	
887	3-954-072-01	LEVER, BRAKE (S) DRIVING	
888	X-3942-962-1	BASE ASSY, PULLEY	
889	3-956-649-01	SPRING, LEAF, COASTER	
*890	3-954-049-01	RETAINER, WORM WHEEL	
891	1-750-620-11	CONNECTOR (OM8 MD)	
892	3-953-985-01	HOLDER, ST SENSOR	
893	3-954-638-01	HOLDER (S), PUSH SWITCH	
894	3-951-639-01	HOLDER (T), PUSH SWITCH	
M903	8-835-499-01	MOTOR, DC SCE-0501A	

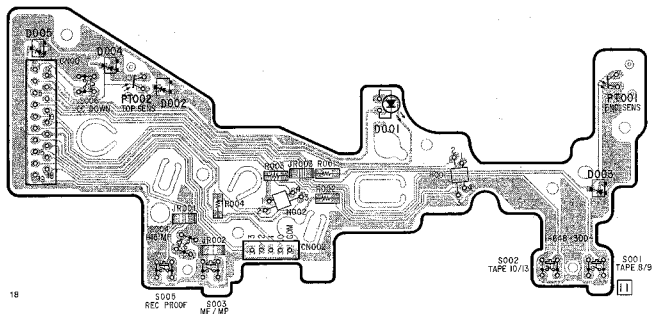
SCHEMATIC DIAGRAM



TO
SERVO/ SYSTEM
CONTROL
BLOCK

PRINTED WIRING BOARD

MD-59 BOARD



8 mm Video MECHANICAL ADJUSTMENT MANUAL V

SECTION 8

ELECTRICAL PARTS LIST

MD-59

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.

RESISTORS

All resistors are in ohms.

METAL: Metal-film resistor.

METAL OXIDE: Metal oxide-film resistor.

F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

SEMICONDUCTORS

In each case, u: μ , for example:

uA...: μ A..., uPA...: μ PA...

uPB...: μ PB..., uPC...: μ PC..., uPD...: μ PD...

CAPACITORS

uF: μ F

COILS

uH: μ H

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
*	1-648-900-11	MD-59 BOARD *****	
	3-953-985-01	HOLDER, ST SENSOR	
	3-954-638-01	HOLDER (S), PUSH SWITCH	
	3-954-639-01	HOLDER (T), PUSH SWITCH	

< CONNECTOR >

CND01	1-569-341-11	CONNECTOR, BOARD TO BOARD 19P	
*CND02	1-750-620-11	CONNECTOR (QMS MD)	

< DIODE >

DD01	8-719-988-42	DIODE GL453S	
DD02	8-719-106-79	DIODE RD13M-B1	
DD03	8-719-106-23	DIODE RD7.5M-E2	
DD04	8-719-106-23	DIODE RD7.5M-E2	
DD05	8-719-106-23	DIODE RD7.5M-E2	

< HOLE ELEMENT >

HO01	1-808-118-11	ELEMENT, HALL HW-300A	
HO02	1-808-118-11	ELEMENT, HALL HW/300A	

< JUMPER RESISTOR >

JR001	1-216-296-00	METAL CHIP	0 5% 1/8W
JR002	1-216-296-00	METAL CHIP	0 5% 1/8W
JR003	1-216-296-00	METAL CHIP	0 5% 1/8W

< TRANSFORMER >

PTD01	8-729-907-25	TRANSISTOR PT4850F	
PTD02	8-729-907-25	TRANSISTOR PT4850F	

< RESISTOR >

RO01	1-216-190-00	METAL GLAZE	470 5% 1/8W
RO02	1-216-190-00	METAL GLAZE	470 5% 1/8W
RO03	1-216-190-00	METAL GLAZE	470 5% 1/8W
RO04	1-216-190-00	METAL GLAZE	470 5% 1/8W

< SWITCH >

SD01	1-692-497-11	SWITCH, PUSH (TAPE 8/9)	
SD02	1-692-497-11	SWITCH, PUSH (TAPE 10/13)	

Ref. No.	Part No.	Description	Remark
SD03	1-692-497-11	SWITCH, PUSH (ME/MP)	
SD04	1-692-497-11	SWITCH, PUSH (HIS MP)	
SD05	1-692-497-11	SWITCH, PUSH (REC PROOF)	

SD06	1-570-953-11	SWITCH, PUSH (1 KEY) (CC DOWN)	
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MISCELLANEOUS

803	1-691-471-11	CONNECTOR, TRANSLATION 11P	
804	1-649-565-11	FF-696 FLEXIBLE BOARD	
825	*	DRUM ASSY	
856	1-692-498-11	SWITCH, ROTARY	
891	1-750-620-11	CONNECTOR (QMS MD)	

MG01	*	DRUM ASSY	
MG02	X-3942-946-1	MOTOR ASSY, CAM	
MG03	8-835-499-01	MOTOR, DC SCF-0501A	

HARDWARE LIST

#1	7-682-645-01	SCREW +PS 3/4	
#2	7-621-772-08	SCREW +B 2X3	
#3	7-688-003-01	W 3, SMALL	
#4	7-628-253-15	SCREW +PS 2X5	
#5	7-688-001-01	W 2, MIDDLE	
#6	7-627-853-57	PRECISION SCREW +P 2X5 TYPES	

8 mm Video MECHANICAL ADJUSTMENT MANUAL V

F MECHANISM

CORRECTION-1

Correct your MECHANICAL ADJUSTMENT MANUAL V as shown below.

Subject:

1. Change of Mounting and Removal of FL Worm Wheel
2. Change of Disassembly Figure, Parts

4-26. FL WORM WHEEL (Fig. 33)(Page 33)

1. Removal

- 1) Disengage tabs **A** at four places and remove the gear cover **①**.
- 2) Remove the FL worm wheel **②**.

2. Mounting

- 1) Mount the FL worm wheel **②**.
- 2) Meeting the hole **B** in drive gear with the hole in side plate, mount the FL worm wheel **②** while meeting the hole **C** in FL worm wheel with the hole in side plate.
- 3) Mount the gear cover **①**.

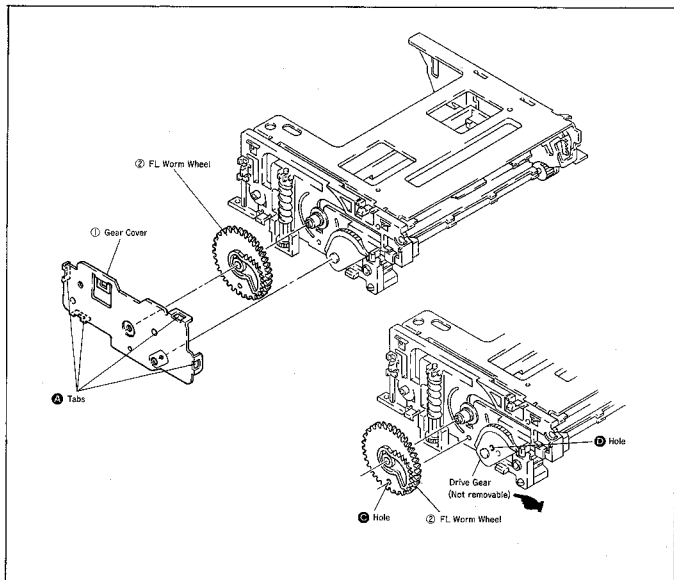
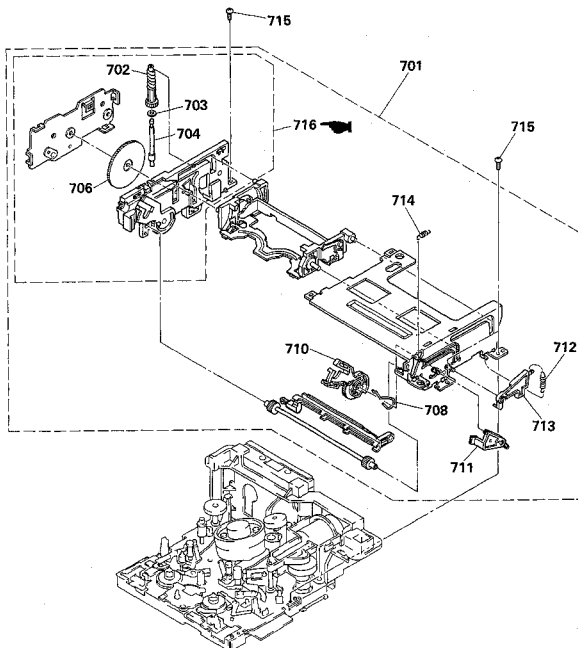


Fig. 33

✖ : Indicates Corrected portion

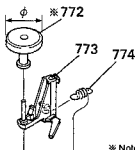
6-1. FRONT LOADING ASSEMBLY (Page 39)



Ref. No.	Part No.	Description	Remark
701	A-7091-941-A	FL BLOCK ASSY	
702	3-954-028-01	GEAR, FL WORM	
703	3-738-212-11	RETAINER, THRUST, REEL TABLE	
✱ 704	3-954-029-01	SHAFT, FL WORM GEAR	
706	3-954-019-01	WHEEL, FL WORM	
708	3-954-042-01	SPRING, PRESS	

Ref. No.	Part No.	Description	Remark
710	3-954-033-01	ARM (T), DRIVING	
✱ 711	3-954-041-01	ARM, DOOR SWITCHING	
712	3-954-043-01	SPRING, TENSION	
✱ 713	3-954-040-01	ARM, CASSETTE IN SWITCH	
714	3-954-044-01	SPRING, TENSION	
715	3-732-017-01	SCREW (2X4.5), TAPPING	
716	A-7091-942-A	PLATE (S), SIDE ASSY	✖

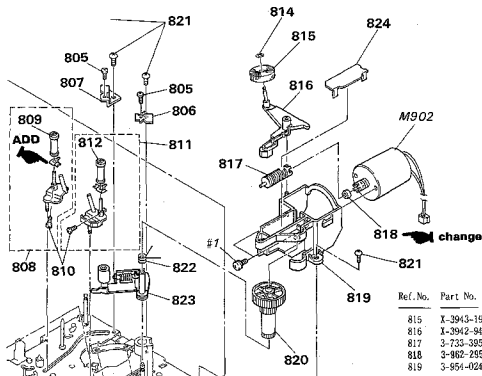
6-2. MD CHASSIS ASSEMBLY (1) (Page 40)



* Note that there are two kinds of impedance roller (M) weights whose diameters are as follows.
NTSC model: ϕ 19
PAL model: ϕ 10

Ref. No.	Part No.	Description	Remark
768	3-726-882-02	FLANGE, LOWER, TC2	
769	3-726-886-01	SLEEVES, TC2	
770	3-726-883-31	ROLLER, TC2	
771	3-726-884-01	FLANGE, UPPER, TC2	
772	3-954-282-01	ROLLER (M NTSC), IMPEDANCE	ADD
772	3-952-051-01	ROLLER (M PAL), IMPEDANCE	ADD
773	X-3943-015-1	BASE ASSY, ROLLER	
774	3-954-284-01	SPRING, TENSION	
775	3-954-096-01	SCREW, TC7 HEIGHT ADJUSTMENT	
776	3-954-093-01	SPACER, TC7	
777	X-3942-958-1	ARM ASSY, TC7	
778	3-954-003-01	SPRING (TC7), TORSION	
779	X-3943-161-1	BRAKE (T) ASSY	
780	3-953-978-01	SPRING, TENSION	
781	3-732-817-01	SCREW (2X4.5), TAPPING	
782	3-736-212-11	RETAINER, THRUST, REEL TABLE	
783	3-669-465-00	WASHER (1.5), STOPPER	

6-3. MD CHASSIS ASSEMBLY (2) (Page 41)



Ref. No.	Part No.	Description	Remark
815	X-3943-192-1	ROLLER ASSY, HC	
816	X-3942-947-1	ARM ASSY, HC	
817	3-733-395-01	GEAR (CAM), WORM	
818	3-962-295-01	RUBBER, JOINT	change
819	3-954-024-01	HOLDER, MOTOR	
820	3-954-023-01	WHEEL, CAM WORM	
821	3-732-817-01	SCREW (2X4.5), TAPPING	
822	3-954-105-01	SPRING (PINCH DRIVING)	
823	X-3942-945-1	ARM ASSY, PINCH	
824	3-958-047-02	MOTOR HOLDER COVER	
825	※	DRUM, UPPER, ROTARY	
M901	※	DRUM ASSY	
M902	X-3942-946-1	MOTOR ASSY, CAM	

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8mm Video MECHANICAL ADJUSTMENT MANUAL V

F MECHANISM

video 8

CORRECTION-2

Please correct your 8mm Video MECHANICAL ADJUSTMENT MANUAL V.

Subject : 5-2. TRACKING ADJUSTMENT

(97-005)

Incorrect

5-2. TRACKING ADJUSTMENT (Fig. 37, 38)

- 1) Play back the tracking alignment tape.
- 2) Loosen the No. 3 guide (TG3) lock screw ① and turn the No. 3 guide to flatten the waveform at the inlet.
- 3) Tighten the No. 3 guide (TG3) lock screw ① to lock the No. 3 guide.
- 4) Loosen the No. 6 guide (TG6) lock screw ② and turn the No. 6 guide to flatten the waveform at the outlet.
- 5) Tighten the No. 6 guide (TG6) lock screw ② to lock the No. 6 guide. When this is done, make sure that the waveform does not change at the outlet.

Note : Be careful not to loosen the lock screw too much because the guide is easily moved.

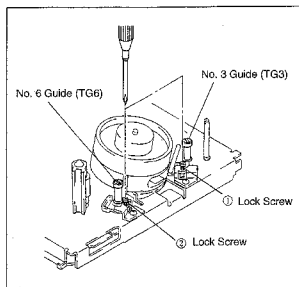


Fig. 37

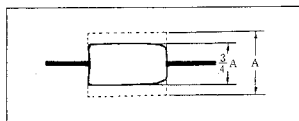


Fig. 38

Correct

5-2. TRACKING ADJUSTMENT (Fig. 37, 38)

- 1) Play back the tracking alignment tape.
- 2) Turn the No. 3 guide to flatten the waveform at the inlet.
- 3) Turn the No. 6 guide to flatten the waveform at the outlet.

Note : Be careful not to touch the lock screw.

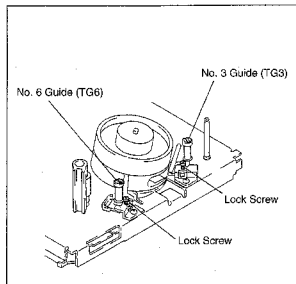


Fig. 37

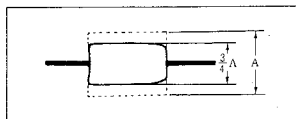


Fig. 38